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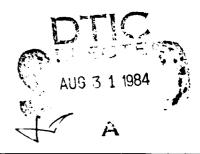


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JOINT PROBABILITY OF SELECTED CLOUD AND VISIBILITY
THRESHOLDS AROUND KOBLENZ, GERMANY

Larry J. Levitt Dr. Oskar M. Essenwanger Research Directorate US Army Missile Laboratory

MARCH 1984





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ceiling and visibility observations defined in a previous report (see reference 1) have been tabulated. The 9-year period was chosen due to a large amount of missing data at Cologne during the months indicated above. The identical set

of tabulations for the complete 10-year period without Cologne did not reveal any notable differences in the probabilities.

For the adverse weather condition of visibility less than or equal to 1 km (fog) at 0700 (LST) the probability estimates at single stations range from 7 to 20 percent in fall, 3 to 17 percent in winter, and reduce from 2 to 8 percent in summer. The two-station probabilities are reduced from 1 to 3 percent in fall, 0.3 to 1.6 percent in winter, and 0.2 to 0.6 percent in summer. Fog occurred simultaneously at the four stations in fall with 0.9 percent, in winter with 0.1 percent.

The extensive set of tables reflects a selected number of adverse weather conditions. The reduction in joint probability estimates with increased areal coverage is evident for all adverse weather categories.

Tabulations of probability estimates at each individual station and joint probability estimates of adverse weather are listed in annual, seasonal, and monthly summaries (selected months only).

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I. INTRODUCTION

This report discusses the second phase of a study on areal probability of adverse weather (see reference 1) for a four-station network in the vicinity of the Koblenz area in Germany. The spatial variability of visibility and cloud ceiling have been derived for the period of record 1961 through 1970 (except September 1967 through August 1968) at a four-station network consisting of Cologne, Frankfurt, Hahn, and Bitburg (see figure 1). This set of stations thus incorporates a different geographic region than in our first report. The empirical probabilities of occurrence at four single stations and their associated joint probabilities have been generated from three-hourly data for the following eight categories:

```
*Visibility < 1 km

*Ceiling < 500 ft

*Ceiling < 500 ft and/or visibility < 2 mi

*Ceiling < 800 ft

*Ceiling < 800 ft and/or visibility < 3 mi

*Ceiling < 2000 ft and/or visibility < 3 mi

*Ceiling < 4500 ft and/or visibility < 4 mi

*Ceiling < 8000 ft and/or visibility < 5 mi</pre>
```

The selection of the time period at stations within the geographic region of interest was determined by the availability of a common period of record in our data. This period of record was 1961-1970. This period contained less missing records than 1960-1969 or 1966-1976. However, the period of record was reduced to 9 years by omitting September 1967 through August 1968, as November and December 1967 and April 1968 were found to be almost entirely missing at Cologne.

A complete set of adverse weather calculations was also performed by using the full 10-year period without Cologne, and no significant differences in the probability estimates were found. Typically, these differences were a few tenths of a percentage point, particularly in the more restrictive adverse weather categories. Therefore, it was concluded that omitting September 1967 through August 1968 from our data set lowered the probabilities of adverse weather in our annual, fall, and winter summaries insignificantly. The results from some of these tabulations have been included following the main set of tables (see tables 49-57).

The comparison of our period of record 1961-1970 with 1966-1976 has been discussed in detail in our previous report (see reference 1). For the present data sets these conclusions that the period of record 1961-1970 does not show any significant change of climatic conditions remain valid.

II. DATA PREPARATION

The procedure to fill in missing data was identical to that applied in the first phase of the areal probability study, and the reader is referred to Section III of our first report (see Reference 1) for details. Overall, considerably few observations needed to be filled in during the creation of three-hourly data for our present study.

The total percentage of missing data at Hahn was less than two percent. With the exception of five missing ceiling and visibility observations, all of these missing observations were encountered during the months of September 1966, and May, June, and July, 1970. Only four observations had been absent in the entire Frankfurt data set.

Our Bitburg climatological record contained very few observations at sporadic intervals during the months of April and May 1966, and September and October 1968. According to our detailed analysis we could replace these months by records from Saarbrucken. These substitutions may lead to a slight reduction of areal probabilities. However, for practicality, this replacement was as suitable as any sophisticated and expensive substitution of data by regression techniques or other statistical tools.

The Saarbrucken ceiling and visibility were recorded to the nearest foot and meter, respectively. These values were converted to conform to the coded values common to the other three stations. (The areal probability estimates are not affected by this conversion.)

Cologne displayed a total percentage of missing data of 8.6 percent. The months that contained the largest quantity of missing data were May, August, and September, which accounted for one-third of the total amount of observations filled in at this station. Otherwise, the missing values were distributed randomly with regard to observation time and season.

The Cologne visibility observations were recorded in tenths of a kilometer, while the other stations were reported in fractions of statute miles (4 miles or greater were recorded in whole miles). Therefore, it was necessary to convert the Cologne visibility observations to their equivalent value in the visibility code used by the other three stations. Above 2 miles, it was necessary to assign a range of visibilities from the Cologne record to the equivalent visibility, e.g., 3.3 through 3.9 km converted to $2\frac{1}{2}$ miles, 4.0 to 4.7 km converted to $2\frac{1}{2}$ miles, etc. It was also necessary to determine the ceiling from the sky cover in conjunction with the first group amount and first group height in the following manner. If the sky cover was less than or equal to four octals, then the ceiling was considered unlimited. If the first cloud group amount in the synoptic code was less than or equal to four octals, the ceiling was also considered unlimited for purposes of this study because the range of the first group is 10,000 feet. Otherwise, the ceiling was assigned the value of the first group height.

III. SINGLE STATION SURVEY

Tables 1-22 show the range of single station adverse weather probabilities generated from the four-station network. The tables are arranged to display the adverse weather probabilities in three-hourly intervals for all data pooled together, stratified by season, and for the selected months September, October, November, December, January, February, and July. The geographic region selected is small enough (about $10,000~\rm km^2$) to be considered as simultaneously under the influence of the same prevailing weather pattern. These data quantify the variation in adverse weather in this area that may be due to geographical effects, the influence of anthropogenic activity, or other factors.

When considered by season, fog [condition (a)] occurs least often in the summer for any observation time. For all adverse weather categories and observation times, the highest probabilities were observed in winter, with the only exception being fog at 07^h LST, in which the highest probabilities of fog were found during fall. The lowest probability of fog at 10^h LST ranges from less than 1 percent in summer to 5 percent in winter, while the highest single-station probabilities range from 1.6 percent in summer (7.5 percent at 07^h LST) to 22 percent in winter. The corresponding range of probabilities for condition (c) at 10^h LST is 13 to 26 percent, and 20 to 49 percent for the lowest and highest probabilities, respectively.

The station with the lowest probabilities of adverse weather during the fall and winter seasons is Cologne, but certain exceptions were noted during the other seasons, as indicated by the footnotes at the bottom of the tables. Hahn is most often the station displaying the highest probabilities of occurrence of adverse weather (see reference 2), but some exceptions have been indicated during all seasons. For the fall, Frankfurt displays the highest probability estimates for condition (e) at 07h LST (68 percent) and 10h LST (52 percent); and Bitburg displays the highest probability estimates (74 percent and 71 percent, respectively) for condition (f) at these same observation times. In contrast, Cologne and Hahn are consistently the stations displaying the lowest and highest probabilities of occurrence, respectively, during the winter, with the only exceptions noted for the two least restrictive adverse weather categories at 10^h LST. The lowest probability of occurrence of fog in spring was often found at Frankfurt, and Bitburg or Frankfurt displayed the lowest probability estimates for condition (c). This was also evident during the summer months.

The monthly tabulations revealed some interesting characteristics of the adverse weather data. The highest probability of fog in September (15 percent) occurs at $07^{\rm h}$ LST; at $10^{\rm h}$ LST this percentage has already dropped to half. A similar trend was displayed by Frankfurt in condition (c), whose probabilities at $07^{\rm h}$ LST (42 percent) and $10^{\rm h}$ LST (22 percent) were the highest for any station in this adverse weather category. A narrow range of probability estimates (5.9 to 8.5 percent) was revealed at $13^{\rm h}$ LST, also for condition (c), where the highest probability estimate was apparent at Cologne. The probability estimates for conditions (e) through (h) were highest at Frankfurt or Bitburg during the morning and early afternoon during September as well as October.

The highest probability estimates for conditions (a) through (c) during the month of October were found at 07^h LST. For November, December, January,

and February, the highest probability estimates of conditions (a) and (c) occur later in the morning, at 10^h LST. The reason is the later hour of sumrise in the winter months and the associated delay in warming of the lower atmosphere. During December, January, and February, the probability estimate of fog at Hahn and Cologne is higher at 16^h LST than at 07^h LST. During July, there is a dramatic drop in probability estimates from 07^h LST to 10^h LST, indicating a rapid improvement of adverse conditions in the morning hours. Several observation times during which fog did not occur in July at Frankfurt, or Frankfurt and Cologne, were noted. Although our data is limited to a 9-year period, the results are in agreement with the climatic conditions and the diurnal and seasonal trend to be expected. A longer period of record or other periods of record, although providing no identical numerical values, would not deviate significantly from our results. Thus, a small factor of uncertainty in both directions may be justified when interpreting our data.

IV. TWO-STATION PROBABILITIES

Tables 13-24 are the tabulations showing the range of two-station probabilities on an annual, seasonal, and monthly basis. As expected, the joint probabilities are less than any of the single station probabilities, but exceed the expected probabilities if assuming statistical independence (i.e., the probability obtained from the product of the two individual station probabilities).

The reduction in probabilities when considering individual station probabilities versus the probabilities of simultaneous occurrence at two stations is apparent from examining any of these tabulations. Examples from the annual summaries demonstrate this. For fog at 07^h LST, the probabilities reduce from a range of 4.5 to 13.6 percent to the two-station probabilities of 0.8 to 5.2 percent, but are higher than the independent probabilities of 0.3 to 1.5 percent. For condition (c) at 07^h LST, the probabilities reduce from a range of 21 to 35 percent to the two-station probabilities of 8 to 14 percent. However, for condition (c) at 16^h LST, the corresponding probabilities are 10 to 18 percent and 3 to 8 percent. For condition (f) at 07^h LST, the single station probabilities are 48 to 64 percent, reducing to a range of 36 to 52 percent for the two-station probabilities.

The lowest probability estimates of adverse weather on an annual basis were primarily associated with the station combination Frankfurt/Cologne for conditions (a) through (d), except at 13^h LST, when Bitburg/Cologne displayed the same or lower percentage. For conditions (e) through (g), Bitburg/Cologne or Hahn/Cologne often displayed the lowest probability estimates in these adverse weather categories. The "worst" station combination was consistently Bitburg/Hahn.

During the fall, the lowest probability estimates at 07^h LST for conditions (d) through (h) were obtained for the combination Hahn/Cologne. For the same adverse weather categories at 10^h LST during the winter, Bitburg/Cologne displayed the lowest probability estimates.

The largest range of probabilities within any adverse weather category was obtained at $10^{\rm h}$ LST for the fall and $07^{\rm h}$ LST for the winter, for which the respective probabilities were 42 to 69 percent and 48 to 78 percent.

The highest two-station probability estimates were observed at 07^h LST for all seasons except winter, in which the probability estimates at 07^h LST and 10^h LST were comparable.

V. THREE-STATION PROBABILITIES

The range of adverse weather probability estimates when areal coverage is expanded to three stations is listed in Tables 25-36.

For condition (c), the joint probability estimates are further reduced from 15 to 26 percent to a range of 10.6 to 15.8 percent at 07^h LST in the fall, from 13 to 29 percent to 10.5 to 19.5 percent at 10^h LST in the winter, and from 9 to 13 percent to 4.4 to 6.6 percent at 07^h LST in the spring, as an example.

The lowest and highest probability estimates were most often obtained for the combinations Bitburg/Frankfurt/Cologne and Bitburg/Frankfurt/Hahm, respectively. One particular exception was that Frankfurt/Hahm/Cologne was the "best" station combination in the morning and early afternoon during the fall for conditions (e) through (h), and at $07^{\rm h}$ LST and $10^{\rm h}$ LST for fog (condition [a]) in October.

The largest average range of probability estimates within any given adverse weather category was 14 percent in the fall, 19 percent in the winter, and 8 percent in the spring for condition (g). During the summer, the largest range of probability estimates was obtained for condition (h).

VI. SPATIAL PROBABILITIES AT FOUR STATIONS

The simultaneous occurrence of adverse weather at all four stations yields the lowest set of probability estimates, as expected. Estimates are listed in Tables 37-48.

The single station probability for condition (c) at 07^h LST (annual summary) ranges between 21 and 35 percent, whereas the spatial probability is 5 percent, with the seasonal fluctuations ranging between 2 and 9 percent. The single station probability for condition (e) at 07^h LST (annual summary) ranges between 30 and 50 percent, with a corresponding spatial probability of 13 percent.

The highest four-station probability of fog on a seasonal basis (nearly 1 percent) was observed at 07^h LST in the fall. It must be considered however that the highest frequency of four-station fog for any given month occurred at 07^h LST in October (2.2 percent). There were no cases of four-station fog for afternoon and evening hours in the fall. However, during December the afternoon was the only time that any four-station fog was observed. The diurnal trend in spatial probabilities is similar to that noted for single-station, two-station, and three-station probabilities. The highest probability estimates were found at 07^h LST for any season except winter, when the probability estimates were significantly higher at 10^h LST.

VII. CONCLUSIONS

The enclosed tabulations provide the probability estimates of selected cloud and visibility thresholds (from 500 through 5000 feet and from 1 km through 8 km, respectively) at a single station, and joint probability estimates for two through four stations from a selected geographic region in the vicinity of Koblenz, Germany. The set of four stations chosen for this study was Frankfurt, Hahn, Bitburg, and Cologne for the period 1961-1970. It is a 9-year period, however, because adequate data was not available for September 1967 through August 1968 at Cologne. Utilization of a 9-year period minimized the amount of data that needed to be filled in to create the completed records of three-hourly ceiling and visibility data.

The annual summaries indicate that fog occurs most often at 07h LST, with a frequency of 4.5 percent and 13.6 percent at Cologne and Hahn, respectively. The joint probability of occurrence at all four stations, however, reduces to 0.3 percent. For the adverse weather condition of ceiling less than or equal to 500 feet and/or visibility less than or equal to 2 miles at 07h LST, the corresponding probability estimates from the annual summary are 21 percent at Cologne and 35 percent at Hahn, reducing to four-station joint probability of 4.7 percent.

A further analysis by season provides additional data on adverse weather variations other than the diurnal trend, which is reflected in the annual summaries. For example, the frequency of fog at 07^h LST is 7.3 percent at Cologne and 20.2 percent at Hahn, reducing to a four-station joint probability of 0.9 percent. Inclusion of monthly tabulations enables the determination of the influence of each individual month on the seasonal probability estimates.

The enclosed tabulations only show the range of probability estimates at individual and station combinations. They provide an estimate of how the probability of adverse weather fluctuates even in a smaller area that is generally considered to be a homogeneous climatic region. The range of probability estimates is considered representative of this area. A refined analysis to include additional stations within this area would not yield significantly lower areal probabilities.

Qualified requesters may examine the complete set of computer tabulations if special arrangements are made with the authors.

REFERENCES

- 1. Essenwanger, O. M., and Larry J. Levitt, November 1983, <u>Joint Probability of Selected Cloud and Visibility Thresholds Around Frankfurt, Germany</u>.

 US Army Missile Command, Redstone Arsenal, Alabama, Technical Report RR-84-1.
- 2. Essenwanger, O. M., 1973, On Spatial Distribution of Visibility and Clouds in Central Europe.

 Alabama, Technical Report 73-10, p. 63.

TABLE 1

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
ANNUAL SUMMARY IN PERCENT
(Local Standard Time)

1961-1970 (Except SEP 67-AUG 68)

| HR | V <u><</u> 1 KM | C<500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C≤800 FT &/OR V≤ 3 MI | C<2000 FT &/OR V< 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C<8000 F1 &/OR V< 5 MI |
|----|--------------------|----------|-----------------------------|----------------------|-----------------------------|------------------------------|---|------------------------------|
| 1 | 2.1 | 3.2 | 10.8 | 4.8 | 17.0 | 31.4 | 40.6 | 53.3 |
| | 8.9 | 20.1 | 25.0 | 25.8 | 37.6 | 51.5 | 58.4 | 65.9 |
| 4 | 2.8 | 3.9 | 13.6 | 6.2 | 20.9 | 38.4 | 47.4 | 60.6 |
| | 12.0 | 24.0 | 30.1 | 30.3 | 45.4 | 60.0 | 65.5 | 72.3 |
| 7 | 4.5 | 5.1 | 20.7 | 8.0 | 29.7 | 47.8 | 55.0 | 66.9 |
| | 13.6 | 27.2 | 34.8 | 34.9 | 49.5 | ² 64.0 | 172.0 | ¹78.1 |
| 10 | 3.3 | 4.2 | 18.1 | 6.0 | 26.3 | 45.5 | 51.2 | 61.7 |
| | 10.6 | 22.3 | 28.1 | 29.4 | 41.1 | 158.6 | 170.0 | 175.3 |
| 13 | 1.7 | 2.6 | 11.9 | 3.8 | 17.8 | 32.9 | 42.6 | 52.1 |
| | 6.3 | 17.0 | 20.0 | 21.9 | 29.2 | 45.4 | 62.5 | ¹68.0 |
| 16 | 1.6 | 1.9 | 10.1 | 3.3 | 15.0 | 27.3 | 35.7 | 44.2 |
| | 6.2 | 14.6 | 18.0 | 18.9 | 26.9 | 38.9 | 54.7 | 60.7 |
| 19 | 1.0 | 2.1 | 9.9 | 3.1 | 15.1 | 28.0 | 35.9 | 47.6 |
| | 6.1 | 14.7 | 19.2 | 19.4 | 30.6 | 41.9 | 52.6 | 59.3 |
| 22 | 1.1 | 1.9 | 8.9 | 2.9 | 15.2 | 28.3 | 37.3 | 49.4 |
| | 6.6 | 16.9 | 20.8 | 21.3 | 32.4 | 45.2 | 54.1 | 61.6 |

^{1.} Bitburg was the "worst" station instead of Hahn.

^{2.} Bitburg and Hahn displayed the same percentage.

TABLE 2

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR SEP-OCT-NOV IN PERCENT
(Local Standard Time)

1961-1970 (Except SEP-NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &/OR V≤ 2 MI | C <u><</u> 800 FT | C≤800 FT &/OR V≤ 3 MI | C <u><</u> 2000 FT &/OR V <u><</u> 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C≤8000 FT &/OR V≤ 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|---|---|------------------------------|
| 1 | 3.7 | 4.3 | 12.5 | 5.7 | 18.2 | 33.8 | 41.8 | 54.6 |
| | 12.1 | 22.2 | 29.7 | 28.5 | 44.2 | 56.9 | 165.0 | 71.2 |
| 4 | 4.8 | 5.0 | 14.4 | 6.8 | 21.1 | 37.7 | 47.0 | 60.8 |
| | 16.4 | 27.0 | 35.5 | 33.5 | 52.6 | 66:5 | 172.4 | 77.1 |
| 7 | 7.3 | 6.5 | 23.3 | 8.2 | 30.8 | 47.0 | 55.1 | 67.8 |
| | 20.2 | 30.5 | 339.9 | 37.2 | 158.4 | ² 74.0 | 182.5 | 186.6 |
| 10 | 4.5 | 5.4 | 19.1 | 6.4 | 26.7 | 45.6 | 50.4 | 63.1 |
| | 15.4 | 25.9 | 33.6 | 34.1 | 152.1 | ² 71.2 | 180.7 | ² 84.4 |
| 13 | 2.1 | 2.9 | 11.7 | 3.8 | 17.0 | 33.9 | 42.0 | 52.6 |
| | 6.9 | 19.1 | 21.7 | 23.7 | 32.2 | 50.4 | ² 64.6 | ² 71.8 |
| 16 | 2.1 | 1.3 | 8.3 | 2.4 | 13.6 | 26.6 | 33.5 | 44.7 |
| | 6.7 | 15.8 | 18.8 | 19.7 | 27.1 | 40.9 | 53.2 | 159.7 |
| 19 | 1.8 | 1.3 | 8.7 | 2.0 | 14.7 | 29.1 | 37.4 | 51.9 |
| | 7.6 | 15.6 | 22.5 | 19.5 | 34.1 | 48.2 | 57.9 | 65.1 |
| 22 | 1.7 | 1.6 | 9.4 | 2.3 | 15.5 | 29.3 | 37.9 | 51.2 |
| | 9.2 | 19.1 | 24.5 | 23.8 | 38.0 | 50.7 | 58.9 | 66.3 |

^{1.} Frankfurt was the "worst" station instead of Hahn.

^{2.} Bitburg was the "worst" station instead of Hahn.

^{3.} Bitburg and Hahn displayed this percentage.

TABLE 3

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR DEC-JAN-FEB IN PERCENT
(Local Standard Time)

1961-1970 (Except DEC 67-FEB 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 3.0 | 4.9 | 16.1 | 8.0 | 26.7 | 44.0 | 55.6 | 66.9 |
| | 16.9 | 35.6 | 41.6 | 44.6 | 58.5 | 75.6 | 81.6 | 86.2 |
| 4 | 2.7 | 5.2 | 18.3 | 9.0 | 26.7 | 47.9 | 57.4 | 67.7 |
| | 18.9 | 39.1 | 46.1 | 47.2 | 63.6 | 78.6 | 83.8 | 87.8 |
| 7 | 3.3 | 5.3 | 18.2 | 9.9 | 28.3 | 49.8 | 58.2 | 69.6 |
| | 17.2 | 38.3 | 47.4 | 49.1 | 65.9 | 83.1 | 87.8 | 91.0 |
| 10 | 4.9 | 5.7 | 26.1 | 8.6 | 38.3 | 58.8 | 64.7 | 73.2 |
| | 22.1 | 38.0 | 49.4 | 46.5 | 65.8 | 79.6 | 186.7 | 190.6 |
| 13 | 3.6 | 5.4 | 23.2 | 7.4 | 34.0 | 49.8 | 56.3 | 66.7 |
| | 16.4 | 35.1 | 42.7 | 43.6 | 57.8 | 75.2 | 82.2 | 86.8 |
| 16 | 4.1 | 4.9 | 22.0 | 7.4 | 29.9 | 46.1 | 53.5 | 62.7 |
| | 16.5 | 31.6 | 40.0 | 40.1 | 56.5 | 73.1 | 80.4 | 84.4 |
| 19 | 2.0 | 4.9 | 17.8 | 6.9 | 28.2 | 45.7 | 55.7 | 68.3 |
| | 13.7 | 30.1 | 38.5 | 40.1 | 58.9 | 74.2 | 81.6 | 85.7 |
| 22 | 2.2 | 3.5 | 15.4 | 5.6 | 25.7 | 42.1 | 52.0 | 62.5 |
| | 12.8 | 33.0 | 39.1 | 40.9 | 56.5 | 73.3 | 79.8 | 84.8 |

^{1.} Frankfurt was the "worst" station instead of Hahn.

TABLE 4

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR MAR-APR-MAY IN PERCENT
(Local Standard Time)

1961-1970 (Except MAR-MAY 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C≤800 FT &/OR V≤ 3 MI | C<2000 FT &/OR V< 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C <u><</u> 8000 FT &/OR V <u><</u> 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|---|---|
| 1 | 1 .7 | 1.9 | ¹ 8.6 | 3.3 | 14.9 | ¹ 27.5 | 38.3 | 50.0 |
| | 4.2 | 14.9 | 18.4 | 19.8 | 29.5 | 4 5.7 | 53.3 | 61.0 |
| 4 | 11.3 | 2.3 | ¹ 11.5 | 4.7 | 20.4 | 35.3 | 44.3 | 58.6 |
| | 8.0 | 19.3 | 23.6 | 25.4 | 37.1 | 53.9 | 60.8 | 68.4 |
| 7 | 3.4 | 4.4 | ² 21.9 | 7.3 | 32.0 | 47.6 | 54.0 | 66.1 |
| | 9.9 | 24.3 | 31.2 | 32.1 | 46.3 | 59.7 | ³ 68.0 | ³ 74.2 |
| 10 | ² 1.5 | 3.3 | ² 13.2 | 5.8 | 23.7 | 44.1 | 49.0 | 61.1 |
| | 3.9 | 16.3 | 19.6 | 23.8 | 32.6 | 52.9 | 365.9 | 372.8 |
| 13 | 1 .2 | 1.3 | ² 5.9 | 2.8 | ² 12.7 | ¹ 27.8 | 41.6 | 51.9 |
| | 1.8 | 9.1 | 10.6 | 13.5 | 18.5 | 37.1 | 61.6 | 66.3 |
| 16 | 1.1 | .7 | ² 4.1 | 2.4 | ² 11.2 | ¹ 19.3 | 33.2 | 40.9 |
| | 1.5 | 6.3 | 8.0 | 9.5 | 15.1 | 27.7 | 50.4 | 56.6 |
| 19 | .2 | 1.6 | ² 7.4 | 2.7 | 12.6 | ¹ 24.2 | 33.0 | 43.8 |
| | 2.5 | 7.5 | 9.9 | 10.9 | 19.9 | 30.6 | 45.3 | 49.9 |
| 22 | 1 .2 | 1.5 | 1 5.6 | 2.5 | ¹11.1 | ¹ 23.6 | 33.5 | *44.9 |
| | 3.1 | 9.8 | 12.2 | 13.5 | 22.2 | 36.2 | 46.9 | 54.4 |

- 1. Frankfurt was the "best" station instead of Cologne.
- 2. Bitburg was the "best" station instead of Cologne.
- 3. Bitburg was the "worst" station instead of Hahn.
- 4. Bitburg and Frankfurt displayed this percentage.

TABLE 5 SINGLE STATION PROBABILITY OF ADVERSE WEATHER FOR JUN-JUL-AUG IN PERCENT (Local Standard Time)

1961-1970 (Except JUN-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|---|------------------------------|
| 1 | 1 .2 | 1.6 | 5.6 | 2.1 | 8.5 | 19.4 | ³ 27.1 | 41.9 |
| | 2.5 | 8.2 | 11.0 | 10.8 | 18.7 | 28.5 | 36.2 | 46.4 |
| 4 | 11.0 | 3.1 | 8.8 | 4.2 | 15.7 | 33.0 | 41.2 | ⁵ 51.6 |
| | 4.8 | 10.9 | 15.8 | 15.6 | 28.9 | 41.3 | 46.6 | 56.4 |
| 7 | ¹ 2.2 | 4.4 | ¹ 15.8 | 5.8 | 27.8 | ⁶ 45.2 | ⁶ 50.7 | ⁶ 57.9 |
| | 7.5 | 15.9 | 21.0 | 21.4 | 36.4 | ⁷ 52.5 | ⁷ 59.3 | ⁸ 68.2 |
| 10 | 1.1 | 2.4 | 1 6.9 | 3.4 | ⁵ 16.3 | 33.7 | 40.8 | 49.8 |
| | 1.6 | 9.5 | 10.9 | 13.8 | 18.4 | ² 35.8 | ² 51.1 | ² 57.1 |
| 13 | 10.0 | 0.6 | 5 4.2 | 1.2 | ⁵ 7.1 | 113.2 | 30.7 | 37.6 |
| | 21.1 | 5.1 | 5.6 | 7.1 | 8.9 | 119.7 | 46.9 | ² 52.9 |
| 16 | ³ 0.0 | 0.5 | 2.8 | 0.9 | 4.7 | ¹ 11.7 | 23.1 | 28.7 |
| | ² 1.0 | 5.1 | 5.6 | 6.6 | 9.7 | ⁴ 14.7 | 35.4 | 43.1 |
| 19 | 0.0 | 0.6 | 4.4 | 1.0 | 5.4 | 1 9.9 | 17.9 | 27.1 |
| | 21.2 | 6.0 | 6.3 | 7.5 | 10.1 | 15.3 | 26.2 | 34.5 |
| 22 | 10.0 | 1.1 | 4.1 | 1.2 | 7.6 | 14.0 | 824.0 | 30.8 |
| | 1.3 | 6.0 | 7.6 | 7.4 | 13.4 | 21.3 | 31.4 | 41.3 |

- Frankfurt was the "best" station instead of Cologne. Bitburg was the "worst" station instead of Hahn.
- 3. Frankfurt and Cologne displayed this percentage.
- Cologne was the "worst" station instead of Hahn. Bitburg was the "best" station instead of Cologne.
- 6. Hahn was the "best" station instead of Cologne.
 7. Frankfurt was the "worst" station instead of Hahn.
 8. Bitburg and Frankfurt displayed this percentage.

TABLE 6 SINGLE STATION PROBABILITY OF ADVERSE WEATHER FOR SEPTEMBER IN PERCENT (Local Standard Time)

1961-1970 (Except SEP 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &/OR V≤ 2 MI | C <u><</u> 800 FT | C <u><</u> 800 FT &/OR V <u><</u> 3 MI | C <u><</u> 2000 FT &/OR V <u><</u> 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C≤8000 FT &/OR V≤ 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|--|---|---|------------------------------|
| 1 | 10.0 | 2.6 | 9.6 | 3.3 | 13.7 | 29.6 | 36.7 | 49.3 |
| | 6.3 | 10.0 | 16.3 | 14.1 | ² 28.5 | ² 38.9 | 351.1 | 357.8 |
| 4 | ¹ 3.7 | 2.6 | 12.6 | 3.7 | 18.9 | 35.6 | 43.0 | 55.2 |
| | 9.3 | 15.2 | 24.4 | 19.3 | ³39.3 | ² 48.9 | 360.7 | 364.4 |
| 7 | 7.0 | 4.8 | 25.9 | 5.2 | 33.3 | 47.0 | 50.0 | ⁵ 63.7 |
| | 15.2 | 19.3 | 341.5 | 24.1 | 361.5 | ³ 72.6 | 378.5 | ³ 83.0 |
| 10 | 3.0 | 4.1 | 14.4 | 4.1 | 19.3 | 37.4 | 41.1 | 55.6 |
| | 7.0 | 14.8 | ³ 21.5 | 20.4 | 341.1 | ³ 58.9 | 368.9 | ² 73.7 |
| 13 | 10.0 | 0.7 | ⁶ 5.9 | 0.7 | 13.7 | 24.8 | 35.6 | 44.4 |
| | 1.1 | 5.9 | ⁷ 8.5 | 8.9 | ² 18.9 | 33.3 | ² 50.7 | ² 57.8 |
| 16 | 10.0 | 0.7 | 4.8 | 0.7 | 7.8 | ¹ 15.6 | 24.1 | 34.4 |
| | 1.1 | 7.0 | 8.9 | 8.9 | 14.1 | 22.6 | 37.8 | 43.7 |
| 19 | 10.0 | 0.4 | 6.3 | 0.4 | 10.7 | 22.2 | 25.6 | ¹ 40.4 |
| | 1.9 | 4.4 | 11.5 | 5.9 | 18.5 | 27.4 | 35.2 | ² 42.2 |
| 22 | 10.0 | 1.1 | 5.9 | 1.1 | 9.6 | 21.1 | 28.2 | ¹ 41.1 |
| | 3.3 | 7.4 | 11.5 | 10.0 | 22.6 | 31.9 | 38.9 | 46.3 |

- Frankfurt was the "best" station instead of Cologne.
 Bitburg was the "worst" station instead of Hahn.
- Bitburg was the "worst" station instead of name.
 Frankfurt was the "worst" station instead of Hahn.
 Frankfurt and Cologne displayed this percentage.
 Hahn was the "best" station instead of Cologne.
 Bitburg was the "best" station instead of Cologne.
 Cologne was the "worst" station instead of Hahn.

TABLE 7

SINGLE STATION PROBABILITY OF ADVERSE WEATHER FOR OCTOBER IN PERCENT (Local Standard Time)

1961-1970 (Except OCT 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &/OR V≤ 2 MI | C <u><</u> 800 FT | C≤800 FT &/OR V≤ 3 MI | C<2000 FT &/OR V< 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C <u><</u> 8000 FT &/OR V <u><</u> 5 MI |
|-----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|---|---|
| 1 | 5.0 | 4.3 | 15.4 | 7.5 | 21.9 | 37.3 | 44.1 | 58.1 |
| | 12.9 | 21.9 | 30.1 | 27.6 | 48.0 | 60.9 | ³ 69.5 | 377.4 |
| 4 | 6.8 | 6.8 | 17.6 | 10.0 | 25.5 | 43.4 | 52.3 | 68.1 |
| | 18.3 | 29.0 | 37.6 | 35.8 | 57.4 | 73.1 | 379.6 | 482.4 |
| 7 | 10.4 | 7.9 | 29.8 | 10.8 | 36.6 | 54.8 | 62.7 | 74.2 |
| | 24.4 | 32.6 | ¹49.1 | 39.8 | 366.3 | ³ 80.3 | ³ 91.0 | 94.3 |
| 10 | 5.7 | 5.4 | 22.9 | 6.8 | 34.4 | 50.9 | 54.8 | 66.3 |
| | 117.6 | 26.2 | 136.2 | 34.4 | 162.0 | 177.8 | ¹ 84.6 | 388.5 |
| 13 | 2.5 | 2.9 | 14.0 | 3.2 | 17.6 | 37.3 | 43.7 | 56.6 |
| | 6.5 | 17.2 | 320.1 | 21.9 | 335.5 | 152.0 | 166.3 | 173.5 |
| 16 | ² 1.1 | 0.7 | 8.6 | 1.4 | 13.3 | 28.3 | 32.6 | 44.1 |
| | 6.5 | 12.9 | ³ 16.5 | 15.4 | 325.1 | 339.8 | 353.8 | ³ 60.9 |
| ·19 | 1.8 | 0.7 | 11.1 | 1.4 | 16.5 | 31.9 | 41.6 | 55.9 |
| | 7.9 | 15.0 | 20.8 | 18.3 | 34.8 | 50.5 | 62.0 | 71.0 |
| 22 | 2.2 | 1.8 | 11.8 | 1.8 | 18.6 | 31.2 | 40.1 | 54.8 |
| | 9.0 | 16.9 | 23.7 | 21.5 | 39.4 | 52.3 | 362.0 | 72.0 |

- Bitburg was the "worst" station instead of Hahn.
 Bitburg was the "best" station instead of Cologne.
 Frankfurt was the "worst" station instead of Hahn.
 Frankfurt and Hahn displayed the same percentage.

TABLE 8

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR NOVEMBER IN PERCENT
(Local Standard Time)

1961-1970 (Except NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C≤800 FT &/OR V≤ 3 MI | C<2000 FT &/OR V< 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|---|------------------------------|
| 1 | 3.3 | 5.9 | 12.2 | 6.3 | 18.9 | 34.4 | 44.4 | 56.3 |
| | 17.0 | 34.8 | 42.6 | 43.7 | 57.4 | 71.9 | 78.9 | 84.4 |
| 4 | 3.3 | 5.6 | 13.0 | 6.7 | 18.9 | 34.1 | 45.6 | 58.9 |
| | 21.5 | 36.7 | 44.4 | 45.2 | 61.9 | 77.8 | 83.7 | 87.8 |
| 7 | 4.4 | 6.7 | 14.1 | 8.5 | 22.2 | 38.9 | 52.2 | 64.8 |
| | 20.7 | 39.6 | 45.2 | 47.8 | 60.4 | 177.8 | ² 83.7 | 87.8 |
| 10 | 4.8 | 6.7 | 19.6 | 8.2 | 26.3 | 48.5 | 55.2 | 67.4 |
| | 23.0 | 36.7 | 46.3 | 47.4 | 61.1 | ² 80.7 | 388.9 | ² 91.9 |
| 13 | 3.3 | 5.2 | 12.6 | 7.4 | 19.6 | 39.6 | 46.7 | 56.7 |
| | 13.0 | 34.1 | 38.5 | 40.4 | 49.6 | 68.2 | ³ 81.5 | 85.2 |
| 16 | 3.0 | 2.6 | 11.5 | 5.2 | 19.6 | 34.1 | 43.7 | 55.6 |
| | 13.0 | 27.4 | 33.0 | 34.8 | 44.8 | 64.1 | 75.6 | 80.7 |
| 19 | 2.6 | 3.0 | 8.5 | 4.1 | 16.7 | 33.0 | 44.8 | 58.2 |
| | 13.0 | 27.4 | 35.2 | 34.4 | 48.9 | 66.7 | 76.3 | 82.2 |
| 22 | 2.2 | 1.9 | 10.4 | 4.1 | 18.2 | 35.6 | 45.2 | 55.2 |
| | 15.2 | 33.0 | 38.9 | 40.0 | 51.9 | 67.8 | 76.3 | 80.4 |

- 1. Bitburg and Hahn displayed the same percentage.
- 2. Bitburg was the "worst" station instead of Hahn.
- 3. Frankfurt was the "worst" station instead of Hahn.

TABLE 9
SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR DECEMBER IN PERCENT
(Local Standard Time)

1961-1970 (Except DEC 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C<800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 2.9 | 4.3 | 14.3 | 6.8 | 24.7 | 42.3 | 55.6 | 69.2 |
| | 17.9 | 39.4 | 44.4 | 49.5 | 60.2 | 77.4 | 83.5 | 87.1 |
| 4 | 2.9 | 3.6 | 16.1 | 9.7 | 26.2 | 49.8 | 56.6 | 68.5 |
| | 19.0 | 40.1 | 46.2 | 48.8 | 63.4 | 79.2 | 83.9 | 87.5 |
| 7 | 2.5 | 3.6 | 15.4 | 9.0 | 25.5 | 51.3 | 58.4 | 70.3 |
| | 18.3 | 39.8 | 47.0 | 50.5 | 64.5 | 83.9 | 88.5 | 90.7 |
| 10 | 3.6 | 4.3 | 24.0 | 8.2 | 38.0 | 60.9 | 66.0 | 74.9 |
| | 22.9 | 39.4 | 48.8 | 50.2 | 64.5 | 80.3 | 88.9 | ¹ 91.8 |
| 13 | 2.5 | 4.7 | 21.5 | 7.5 | 34.1 | 49.8 | 55.6 | 70.6 |
| | 17.6 | 39.1 | 47.0 | 49.8 | 62.4 | 79.6 | 84.2 | 88.5 |
| 16 | 3.9 | 4.7 | 22.2 | 8.6 | 34.1 | 53.1 | 61.3 | 68.8 |
| | 20.4 | 39.8 | 45.2 | 48.8 | 62.7 | 78.9 | 85.0 | 87.8 |
| 19 | 2.2 | 5.4 | 17.2 | 6.8 | 29.0 | 46.2 | 55.2 | 66.7 |
| | 15.8 | 34.8 | 42.3 | 45.2 | 61.7 | 79.2 | 86.0 | 90.0 |
| 22 | 2.2 | 3.2 | 14.3 | 5.7 | 26.9 | 39.1 | 50.9 | 63.1 |
| | 14.7 | 35.1 | 40.1 | 44.4 | 59.9 | 77.1 | 82.8 | 86.7 |

^{1.} Frankfurt was the "worst" station instead of Hahn.

TABLE 10

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR JANUARY IN PERCENT
(Local Standard Time)

1961-1970 (Except JAN 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &/OR V≤ 2 MI | C <u><</u> 800 FT | C≤800 FT &/OR V≤ 3 MI | C <u><</u> 2000 FT &/OR V <u><</u> 4 MI | C <u><</u> 4500 FT &/OR V <u><</u> 4 MI | C≤8000 FT &/OR V≤ 5_MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|---|---|------------------------------|
| 1 | 3.9 | 5.7 | 19.4 | 7.9 | 28.3 | 46.6 | 58.4 | 69.9 |
| | 22.2 | 41.9 | 48.4 | 51.6 | 66.0 | 81.0 | 85.0 | 89.3 |
| 4 | 2.9 | 6.8 | 19.0 | 9.0 | 26.5 | 48.0 | 59.9 | 69.9 |
| | 23.7 | 44.4 | 51.3 | 53.8 | 68.5 | 79.9 | 84.6 | 88.2 |
| 7 | 3.9 | 7.2 | 17.9 | 10.4 | 29.8 | 50.2 | 61.3 | 72.8 |
| | 21.2 | 40.5 | 48.8 | 51.3 | 68.1 | 84.2 | 88.5 | 91.8 |
| 10 | 4.3 | 7.2 | 25.1 | 10.0 | 38.7 | 59.5 | 67.4 | 74.2 |
| | 26.9 | 40.5 | 52.7 | 47.3 | 68.5 | 181.0 | 88.5 | ² 93.6 |
| 13 | 5.0 | 6.8 | 24.7 | 7.9 | 35.8 | 50.2 | 58.1 | 66.7 |
| | 20.8 | 38.0 | 44.8 | 47.0 | 62.4 | 79.6 | 84.6 | 88.5 |
| 16 | 6.1 | 7.2 | 23.3 | 9.0 | 29.0 | 45.5 | 53.1 | 63.4 |
| | 22.2 | 34.8 | 45.9 | 42.7 | 60.2 | 77.4 | 84.2 | 87.1 |
| 19 | 2.9 | 5.7 | 17.6 | 6.5 | 27.6 | 46.2 | 59.5 | 72.4 |
| | 19.4 | 36.9 | 44.8 | 45.5 | 62.0 | 76.4 | 82.4 | 86.0 |
| 22 | 2.2 | 5.0 | 15.8 | 6.1 | 26.5 | 44.8 | 55.9 | 66.0 |
| | 16.9 | 40.5 | 46.6 | 49.1 | 62.0 | 77.1 | 81.4 | 86.4 |

^{1.} Bitburg was the "worst" station instead of Hahn.

^{2.} Frankfurt was the "worst" station instead of Hahn.

TABLE 11

SINGLE STATION PROBABILITY OF ADVERSE WEATHER
FOR FEBRUARY IN PERCENT
(Local Standard Time)

1961-1970 (Except FEB 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &/OR V≤ 2 MI | C <u><</u> 800 FT | C <u><</u> 800 FT &/OR V <u><</u> 3 MI | C <u><</u> 2000 FT &/OR V <u><</u> 4 MI | C≤4500 FT &/OR V≤ 4 MI | C≤8000 FT &/OR V≤ 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|--|---|------------------------------|------------------------------|
| 1 | 2.0 | 4.8 | 14.3 | 9.5 | 27.0 | 42.9 | 52.4 | 61.1 |
| | 9.9 | 24.2 | 31.0 | 31.4 | 48.4 | 67.5 | 75.8 | 81.8 |
| 4 | 2.4 | 5.2 | 19.8 | 8.3 | 27.4 | 45.6 | 55.6 | 64.3 |
| | 13.5 | 32.1 | 40.1 | 38.1 | 58.3 | 76.6 | 82.9 | 87.7 |
| 7 | 3.6 | 5.2 | 21.4 | 10.3 | 29.8 | 47.6 | 54.4 | 65.5 |
| | 11.5 | 34.1 | 46.4 | 45.2 | 65.1 | 81.0 | 86.1 | 90.5 |
| 10 | 7.1 | 5.6 | 29.4 | 7.5 | 38.1 | 55.6 | 60.3 | 70.2 |
| | 15.9 | 33.7 | 46.4 | 41.7 | 64.3 | 78.2 | 83.7 | 87.7 |
| 13 | 3.2 | 4.8 | ¹ 23.0 | 6.8 | 31.8 | 49.2 | 55.2 | 62.3 |
| | 10.3 | 27.4 | 35.7 | 32.9 | 47.6 | 65.5 | 77.4 | 82.9 |
| 16 | 2.0 6.0 | 2.8 19.1 | ² 15.5 27.8 | 4.4 27.8 | 26.2 45.6 | 38.9 61.9 | 45.2 71.0 | 55.2 77.8 |
| 19 | 0.8 | 3.6 | ² 15.1 | 7.5 | 27.8 | 44.4 | 52.0 | 55.5 |
| | 5.2 | 17.5 | 27.4 | 28.6 | 52.4 | 66.3 | 75.8 | 80.6 |
| 22 | 2.4 | 2.0 | ² 13.5 | 4.8 | 23.4 | 42.5 | 48.8 | 57.9 |
| | 6.4 | 22.2 | 29.8 | 27.8 | 46.8 | 65.1 | 74.6 | 81.0 |

^{1.} Bitburg and Frankfurt displayed this percentage.

^{2.} Bitburg was the "best" station instead of Cologne.

TABLE 12 SINGLE STATION PROBABILITY OF ADVERSE WEATHER FOR JULY IN PERCENT (Local Standard Time)

1961-1970 (Except JUL 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &/OR V≤ 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------------------------|----------------------|-----------------------------|----------------------|-----------------------------|---|--|------------------------------|
| 1 | 10.4 | 1.4 | 3.9 | 1.8 | 9.3 | ⁵ 17.6 | ⁵ 27.2 | ⁵ 34.8 |
| | 1.4 | 6.5 | 8.6 | 9.7 | 17.2 | 26.9 | 36.9 | 50.2 |
| 4 | ² 1.1 | 3.2 | 9.3 | 3.9 | 16.1 | ⁵ 29.4 | ⁵ 40.9 | ⁵ 52.3 |
| | ³ 3.6 | 11.5 | 16.9 | 14.7 | 27.6 | 41.9 | 49.1 | 60.6 |
| 7 | ¹ 2.2 | 5.4 | ² 15.8 | 1 6.1 | ⁸ 27.6 | ⁸ 41.6 | ⁸ 48.0 | ⁸ 56.3 |
| | 6.5 | 15.4 | 18.3 | 19.0 | ³ 35.5 | ³ 50.9 | ³ 59.9 | ³ 69.9 |
| 10 | ² 0.0 | 1.4 | ⁵ 5.7 | 2.2 | ⁵ 12.5 | ⁵ 30.1 | 43.0 | ⁸ 50.4 |
| | 1.4 | 7.5 | ⁶ 8.2 | 11.1 | ⁶ 17.2 | ¹ ⁰ 34.8 | ³ 48.8 | ³ 56.3 |
| 13 | ² 0.0 ³ 1.1 | 0.4 3.9 | 5 3.6 5.0 | 4 6.1 | 9 6.5 4 7.5 | ² 12.2 ¹⁰ 20.8 | ² 31.9 ³ 48.4 | 40.5 353.4 |
| 16 | 10.0 | 0.0 | 1.8 | 0.4 | 4.3 | \$ 8.6 | ² 25.1 | 31.2 |
| | 31.1 | 5.0 | 5.4 | 5.0 | 8.2 | 1015.8 | 33.3 | 40.9 |
| 19 | 10.0 | 0.4 | 3.2 | 0.7 | 4.7 | ² 9.7 | 17.2 | 26.5 |
| | 31.4 | 3 5.3 | 3 5.4 | 3 5.7 | 7.5 | 12.9 | 24.7 | 34.4 |
| 22 | ² 0.0 ³ 1.4 | 4 4.7 | 3.2 7 5.4 | 3 1.1 3 5.7 | 7.5 11.1 | ² 13.3 ⁶ 20.4 | ² 24.4 31.5 | ⁵ 33.0 44.4 |

- Frankfurt and Cologne displayed this percentage.
 Frankfurt was the "best" station instead of Cologne.
 Bitburg was the "worst" station instead of Hahn.

- Frankfurt was the "worst" station instead of Hahn. Bitburg was the "best" station instead of Cologne.
- Hahn and Cologne displayed this percentage.
- Frankfurt and Hahn displayed this percentage. Hahn was the "best" station instead of Cologne. Bitburg and Cologne displayed this percentage.
- 10. Cologne was the "worst" station instead of Hahn.

TABLE 13 TWO STATION PROBABILITIES OF ADVERSE WEATHER ANNUAL SUMMARY IN PERCENT (Local Standard Time)

1961-1970 (Except SEP 67-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.2 | 0.6 | 3.6 | 1.2 | 9.4 | 19.9 | 29.3 | 39.9 |
| | 3.2 | 7.4 | 11.4 | 11.1 | 21.8 | 35.7 | 45.0 | 51.7 |
| 4 | 0.4 | 0.9 | 5.2 | 1.5 | 11.8 | 26.7 | ¹ 36.7 | ¹ 48.0 |
| | 4.1 | 8.5 | 14.7 | 13.0 | 27.4 | 43.2 | 52.7 | 59.7 |
| 7 | 0.8 | ¹ 1.2 | 9.5 | 2.1 | ²19.9 | 35.5 | 44.9 | 57.1 |
| | 5.2 | 9.7 | 18.6 | 15.0 | 32.7 | 51.6 | 60.1 | 67.1 |
| 10 | 0.7 | 1.1 | ¹ 7.6 | 2.0 | ¹ 15.8 | 33.2 | ³ 41.6 | ³ 51.3 |
| | 3.9 | 8.7 | 14.4 | 14.2 | 27.9 | 46.4 | 58.5 | 64.7 |
| 13 | 10.2 | ² 0.6 | 1 4.1 | 0.9 | 1 9.2 | 19.5 | 30.9 | 40.5 |
| | 1.6 | 5.9 | 9.4 | 9.6 | 17.6 | 32.6 | 51.8 | 57.8 |
| 16 | 10.2 1.6 | 0.3 4.9 | ¹ 3.3 7.6 | 0.8 8.2 | 7.6 16.1 | 15.9 27.7 | 24.4 41.8 | 32.4 48.1 |
| 19 | 0.1 | 0.4 | ² 3.3 | 0.9 | 7.8 | 16.8 | 24.8 | ¹ 36.0 |
| | 1.9 | 5.2 | 8.4 | 8.1 | 17.2 | 29.1 | 40.1 | 47.0 |
| 22 | 0.1 | 0.5 | 2.5 | 0.9 | 7.8 | 17.2 | 25.4 | 35.0 |
| | 2.1 | 6.2 | 9.1 | 9.5 | 17.7 | 30.1 | 39.4 | 46.3 |

Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Bitburg/Cologne displayed the same percentage as Frankfurt/Cologne.
 Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.

TABLE 14 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR SEP-OCT-NOV IN PERCENT (Local Standard Time)

1961-1970 (Except SEP-NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.2 | 1.0 | 5.3 | 1.7 | 12.1 | 25.4 | ¹ 33.6 | ² 44.4 |
| | 4.2 | 9.3 | 15.5 | 13.4 | 28.7 | 43.1 | 51.3 | 58.6 |
| 4 | 0.5 | 1.3 | 7.1 | 1.8 | 14.9 | ² 29.8 | ² 39.0 | 51.7 |
| | 5.9 | 9.8 | 18.9 | 15.6 | 34.9 | 51.0 | 59.7 | 66.4 |
| 7 | 1.6 | 2.2 | 15.0 | 2.9 | ³ 23.4 | ³ 38.3 | ³46.4 | ³ 57.4 |
| | 9.5 | 13.6 | 25.9 | 18.8 | 41.9 | 59.0 | 69.6 | ⁴ 76.1 |
| 10 | 1.1 | 2.0 | 10.3 | 2.7 | ² 20.0 | ³ 36.5 | 42.3 | ³ 52.8 |
| | 6.6 | 13.1 | 20.5 | 18.1 | ⁵ 36.4 | ⁴ 56.2 | 69.0 | ⁴ 74.9 |
| 13 | 10.2 | 1 0.7 | ² 4.9 | 1.2 | ² 9.9 | 22.3 | 32.0 | ³ 41.9 |
| | 1.3 | 6.6 | 10.7 | 11.1 | 21.5 | 38.5 | 53.6 | 60.1 |
| 16 | 0.1 | 0.0 | 2.4 | 0.6 | 6.5 | 16.7 | ³ 24.3 | ² 33.3 |
| | 1.6 | 5.3 | 8.1 | 8.4 | 18.2 | 30.5 | 40.9 | 46.6 |
| 19 | 0.0 | 0.1 | 2.4 | 0.6 | 7.7 | 20.4 | 27.4 | ² 39.3 |
| | 1.8 | 6.1 | 10.0 | 9.5 | 20.0 | 33.0 | 43.8 | 52.8 |
| 22 | 0.1 | 0.6 | 2.9 | 1.0 | 9.4 | ² 20.2 | ² 28.0 | ² 39.8 |
| | 2.6 | 7.7 | 11.6 | 11.7 | 22.0 | 35.2 | 44.4 | 51.9 |

Bitburg/Cologne displayed the same percentage as Frankfurt/Cologne. Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne. Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne. Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn. Bitburg/Frankfurt displayed the same percentage as Bitburg/Hahn.

TABLE 15 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR DEC-JAN-FEB IN PERCENT (Local Standard Time)

1961-1970 (Except DEC 67-FEB 68)

| HR | <u>,V≤</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|-----------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.6 | 1.0 | 1 6.5 | 2.2 | ¹ 16.7 | 32.7 | ¹ 47.0 | 58.6 |
| | 7.5 | 15.8 | 22.0 | 22.7 | 37.9 | 59.5 | 71.1 | 76.7 |
| 4 | 0.5 | 1.4 | ¹ 7.3 | 3.1 | 16.2 | 36.8 | 48.5 | 58.6 |
| | 8.0 | 17.0 | 25.1 | 24.6 | 42.1 | 63.2 | 73.8 | 77.9 |
| 7 | 10.5 | 1 1.2 | 8.4 | 3.1 | ¹ 17.7 | 36.8 | 48.3 | 61.2 |
| | 6.8 | 16.9 | 26.4 | 25.2 | 42.4 | 66.8 | 77.8 | 81.6 |
| 10 | 11.4 | 1 1.2 | ¹ 13.3 | 2.8 | ¹ 25.7 | ¹ 47.8 | ¹ 57.8 | 166.9 |
| | 8.6 | 16.3 | 28.5 | 25.9 | 48.0 | 66.8 | 76.7 | 383.0 |
| 13 | 10.7 | ² 1.5 | ¹ 9.3 | 2.1 | ¹ 21.1 | ² 37.5 | ¹ 48.8 | ¹ 59.0 |
| | 5.2 | 14.8 | 23.1 | 21.7 | 38.6 | 60.1 | 73.3 | 78.0 |
| 16 | 10.6 | 1.0 | 1 8.5 | 2.2 | ¹ 17.8 | 34.4 | ¹ 45.3 | 55.1 |
| | 4.8 | 12.7 | 19.4 | 19.9 | 35.8 | 56.8 | 69.5 | 75. 4 |
| 19 | 10.1 | 1.4 | i 6.9 | 2.6 | ¹ 16.2 | 33.0 | ¹ 45.2 | ¹ 58.0 |
| | 5.3 | 13.2 | 19.9 | 18.8 | 35.2 | 56.5 | 69.3 | 74.6 |
| 22 | 0.1 | 1.2 | 5.6 | ² 2.7 | ¹ 15.3 | 31.6 | 43.1 | 53.5 |
| | 5.6 | 14.3 | 19.4 | 21.1 | 35.1 | 55.3 | 67.5 | 73.7 |

Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Bitburg/Cologne displayed the same percentage as Frankfurt/Cologne.
 Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.

TABLE 16 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR MAR-APR-MAY IN PERCENT (Local Standard Time)

1961-1970 (Except MAR-MAY 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.1 | ² 0.2 | 1.7 | 0.4 | 5.3 | 13.4 | 23.8 | 34.8 |
| | 0.9 | 2.9 | 5 5.0 | 5.7 | 12.8 | 27.2 | 37.3 | 44.6 |
| 4 | 0.2 | 0.2 | ⁶ 3.3 | 0.5 | 8.7 | 20.3 | 31.3 | ³ 43.6 |
| | 1.5 | 5.1 | 9.2 | 8.2 | 20.1 | 36.1 | 47.0 | 54.1 |
| 7 | 0.4 | ³ 0.1 | 8.6 | ² 1.5 | ³ 19.8 | 34.1 | 43.4 | 55.2 |
| | 2.5 | 5.4 | 12.9 | 10.3 | 27.8 | 46.6 | 55.8 | 64.7 |
| 10 | *0.0 | 0.2 | ³ 3.6 | ³ 0.7 | ³ 11.7 | 28.2 | 38.0 | 49.4 |
| | 0.5 | 3.6 | ⁷ 6.9 | 7.4 | 17.9 | 40.9 | 54.2 | 61.7 |
| 13 | 10.0 | 0.0 | 1.2 | 0.0 | ³ 4.2 | 13.0 | 28.1 | 37.2 |
| | 0.1 | 1.8 | 3.0 | 4.6 | 8.2 | 21.6 | 49.7 | 56.0 |
| 16 | 10.0 | *0.0 | ⁸ 0.9 | ³ 0.2 | 3.9 | 8.8 | 18.0 | 25.6 |
| | 0.1 | 1.1 | 2.2 | 3.1 | 7.6 | 16.2 | 36.9 | 43.7 |
| 19 | 10.0 | ³ 0.1 | 6 1.6 | ² 0.2 | 4.5 | 11.1 | 19.9 | 29.2 |
| | 0.5 | 1.2 | 3.0 | 3.3 | 10.0 | 19.8 | 33.0 | 40.1 |
| 22 | 0.0 | ² 0.0 | 0.4 | 0.0 | 2.9 | 10.5 | 19.3 | 28.1 |
| | 0.5 | 1.9 | 4.0 | 4.1 | 9.5 | 20.4 | 31.2 | 38.0 |

All other station combinations except Bitburg/Hahn displayed 0%.

Bitburg/Cologne displayed the same percentage as Frankfurt/Cologne.
Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
Bitburg/Cologne displayed the same percentage as Bitburg/Frankfurt.
Bitburg/Hologne displayed the same percentage as Hologne.

Frankfurt/Cologne displayed the same percentage as Bitburg/Frankfurt.

Hahn/Cologne was the "worst" station combination instead of Bitburg/Hahn.

8. Bitburg/Frankfurt was the "best" station combination instead of Frankfurt/Cologne.

TABLE 17 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR JUN-JUL-AUG IN PERCENT (Local Standard Time)

1961-1970 (Except JUN-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 | 0.1 | 0.7 | 0.4 | 2.9 | 1 8.5 | 12.8 | ⁷ 19.8 |
| | 0.4 | 1.7 | 3.5 | 3.0 | 8.1 | 13.8 | 20.8 | 27.7 |
| 4 | ² 0.1 | 0.5 | 2.4 | 0.5 | 8 7.6 | 417.4 | *25.2 | ⁷ 36.1 |
| | 1.1 | 2.2 | 5.9 | 3.8 | 12.8 | 22.8 | 30.8 | ⁶ 40.7 |
| 7 | 0.5 | 0.7 | ² 5.8 | 1.0 | ² 14.6 | ⁹ 29.6 | ⁹ 34.9 | ⁹ 44.2 |
| | 2.2 | 3.0 | ⁶ 9.3 | 6.2 | ¹² 19.9 | 34.5 | 41.8 | ¹⁰ 53.3 |
| 10 | 0.0 | * 0.2 | 1.2 | 8 1.1 | ⁷ 5.7 | 17.0 | 25.4 | 33.2 |
| | ³ 0.2 | 2.1 | 5 3.5 | 5.7 | 9.7 | 23.0 | 38.3 | 44.2 |
| 13 | 0.0 | 4 0.0 | 7 0.2 | 0.1 | ⁷ 1.2 | 1 5.7 | 15.1 | 22.2 |
| | 0.0 | 5 0.6 | 5 1.3 | 1.2 | 6 2.7 | 10.9 | 31.2 | 37.4 |
| 16 | 0.0 | 0.0 | 1 0.1 | 0.0 | 7 0.9 | 3.9 | 9.2 | 14.7 |
| | 0.0 | 0.7 | 1.2 | 1.6 | 3.3 | 7.9 | 20.7 | 27.1 |
| 19 | 0.0 0.0 | 0.0 6 0.6 | ⁷ 0.5 ⁵ 1.6 | 0.1 1.2 | 1.3 3.9 | 3.0 8.0 | 6.2 14.9 | 11.7 21.1 |
| 22 | 0.0 | 0.0 | 7 0.0 | 0.0 | ⁷ 1.5 | 6.0 | ⁷ 10.4 | ⁷ 16.2 |
| | 0.0 | 0.9 | 1.7 | 1.5 | 4.6 | 10.1 | ⁵ 15.3 | ⁵ 24.2 |

- Bitburg/Frankfurt displayed the same percentage as Frankfurt/Cologne.
- 2. Frankfurt/Hahn was the "best" station combination instead of Frankfurt/Cologne.
- 3. Bitburg/Cologne displayed the same percentage as Hahn/Cologne.
 4. Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 5. Hahn/Cologne was the "worst" station combination instead of Bitburg/Hahn.

- Bitburg/Hahn displayed the same percentage as Hahn/Cologne. Bitburg/Frankfurt was the "best" station combination instead of Frankfurt/Cologne.

- 8. Bitburg/Cologne displayed the same percentage as Frankfurt/Cologne.
 9. Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 10. Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.
- 11. Bitburg/Frankfurt displayed the same percentage as Bitburg/Cologne.
- 12. Bitburg/Hahn displayed the same percentage as Bitburg/Frankfurt.

TABLE 18

TWO STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEPTEMBER IN PERCENT

(Local Standard Time)

1961-1970 (Except SEP 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C< 4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|-------------------------|-------------------------|-----------------------------|----------------------|--|------------------------------|---|---|
| 1 | 10.0 21.1 | *0.0 2.6 | 2.2 | *0.0 6.7 | 117.0 17.8 | 17.8 27.0 | ¹² 23.0 31.1 | 833.7 38.2 |
| 4 | 0.0 21.9 | 0.0 2.6 | 5.2 12.2 | 0.0 6.3 | 1112.2 24.1 | ¹² 23.7 33.7 | 12 30.0 5 40.4 | 1240.4 49.3 |
| 7 | 0.7 5.2 | ³ 1.1 5.9 | 13.7 518.2 | 1.1 9.3 | 1221.1 541.5 | 1232.6 553.0 | ¹² 35.6 ⁵ 59.3 | 1247.0 567.8 |
| 10 | ³ 0.4 1.5 | ¹ 1.1 4.1 | 5.9 10.7 | 1.1 8.2 | ⁸ 12.2 ⁵ 22.2 | 1 2 25 . 2 5 41 . 5 | ¹² 29.6 ⁵ 53.7 | ¹² 38.5 ⁵ 61.1 |
| 13 | 0.0 | ³0.0 1.5 | ⁸ 0.7 14 1.9 | ³0.0 3.0 | 12 4.4 9.3 | 11.9 20.7 | 20.7 39.6 | 28.9 45.2 |
| 16 | 0.0 | 0.0 1.5 | 9 0.4 2 2.2 | 0.0 3.0 | 0.7 7.4 | 5.6 14.8 | 10.7 23.7 | 19.6 29.3 |
| 19 | 0.0 | *0.0 0.7 | 4 1.9 7 4.1 | 0.0 1.5 | 3.7 10.7 | ¹³ 11.5 16.7 | 814.4 22.6 | 24.8 31.1 |
| 22 | 0.0 ² 0.7 | 50.0 60.7 | 10 0.7 7 3.3 | ¹0.4 2.2 | 4.4 11.9 | 12.2 19.3 | 14.4 24.8 | 25.6 31.1 |

- Three station combinations displayed this percentage.
- Hahn/Cologne was the "worst" station combination instead of Bitburg/Hahn.
- 3. Frankfurt/Cologne and Bitburg/Cologne displayed this percentage.
- 4. Frankfurt/Cologne and Bitburg/Frankfurt displayed this percentage.
- Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.
 Bitburg/Hahn and Frankfurt/Hahn displayed this percentage.

- Bitburg/Hahn and Hahn/Cologne displayed this percentage.
 Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
- 9. Frankfurt/Hahn and Frankfurt/Cologne displayed this percentage.
- 10. Bitburg/Frankfurt was the "best" station combination instead of Frankfurt/Cologne. 11. Frankfurt/Cologne and Hahn/Cologne displayed this percentage.
- 12. Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 13. Hahn/Cologne and Bitburg/Cologne displayed this percentage.
- 14. Four station combinations displayed this percentage.

TABLE 19 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR OCTOBER IN PERCENT (Local Standard Time)

1961-1970 (Except OCT 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|-------------------------|-----------------------------|--------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.7 | 1.1 | 7.5 | 2.5 | 15.4 | ⁷ 30.8 | ⁶ 37.3 | ⁶ 50.9 |
| | 5.7 | 9.0 | 17.9 | 11.8 | 32.3 | 47.0 | 55.9 | 63.8 |
| 4 | 1.1 | 1.8 | 9.7 | 3.2 | 18.3 | ³ 35.8 | ⁶ 44.8 | 58.8 |
| | 17.5 | 10.8 | 20.1 | 16.5 | 39.4 | 56.3 | 64.9 | 872.0 |
| 7 | 3.9 | 2.9 | 21.2 | 3.9 | 29.8 | 47.7 | ⁶ 58.1 | ⁷ 64.9 |
| | 12.9 | 14.0 | 532.3 | 18.3 | ¹ 51.6 | 165.6 | ¹ 79.9 | ¹ 86.4 |
| 10 | 1.8 | 2.2 | ³ 12.9 | 3.6 | ⁷ 25.5 | ⁷ 40.5 | ⁷ 46.6 | ⁷ 57.4 |
| | 9.3 | 14.7 | 21.9 | 18.6 | ¹ 45.5 | ¹ 63.8 | ¹ 73.8 | ¹ 79.2 |
| 13 | ² 0.0 | 6 0.4 | 6.1 | ³ 0.7 | ² 11.5 | 26.2 | 33.3 | 44.8 |
| | 1.4 | 4.3 | 9.3 | 8.6 | ⁵ 21.5 | 40.1 | 53.1 | 59.5 |
| 16 | ³ 0.0 | 0.0 | 1.8 | 0.0 | 6.5 | ⁷ 17.2 | ⁷ 21.5 | ⁶ 31.2 |
| | 0.7 | 3.9 | 5.4 | 4.7 | 14.7 | 26.9 | 36.6 | ⁹ 43.7 |
| 19 | 40.0 | 4 0.0 | 1.8 | 0.0 | 8.2 | ⁶ 22.9 | 30.1 | 42.3 |
| | 51.1 | 4.7 | 9.3 | 7.9 | ⁸ 19.4 | ⁸ 34.1 | 46.2 | 55.9 |
| 22 | €0.0 2.2 | ³ 0.4 6.8 | 4.3 11.8 | ³ 0.4 10.4 | 11.1 23.3 | ⁶ 20.8 36.9 | 630.1 846.2 | 44.8 58.1 |

- 1. Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.
- 2. Frankfurt/Cologne and Hahn/Cologne displayed this percentage.
- Frankfurt/Cologne and Bitburg/Cologne displayed this percentage. Frankfurt/Cologne, Hahn/Cologne, and Bitburg/Cologne displayed this percentage.
- Bitburg/Hahn and Bitburg/Frankfurt displayed this percentage.
 Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
- Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.
- Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.
- Bitburg/Hahn and Frankfurt/Hahn displayed this percentage.

TABLE 20 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR NOVEMBER IN PERCENT (Local Standard Time)

1961-1970 (Except NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 1.9 | 5.9 | 2.6 | 13.7 | 26.3 | 38.9 | 48.9 |
| | 5.9 | 16.3 | 21.1 | 21.9 | 35.9 | 55.2 | 66.7 | 73.7 |
| 4 | 0.4 | ² 2.2 | 6.3 | 2.2 | ¹ 13.7 | ² 28.2 | ¹ 40.0 | 53.3 |
| | 9.3 | 15.9 | 24.4 | 24.1 | 41.1 | 63.0 | 74.1 | 78.2 |
| 7 | 0.0 | ² 2.6 | 7.0 | 3.7 | 15.9 | 31.5 | 47.8 | 59.6 |
| | 10.4 | 20.7 | 27.4 | 28.9 | 43.3 | 67.4 | 75.6 | 79.3 |
| 10 | 1.1 | 2.6 | 11.9 | 3.3 | ² 20.4 | 42.6 | ² 52.2 | *62.2 |
| | 8.9 | 20.4 | 28.9 | 27.4 | 45.6 | 69.6 | ³ 79.3 | 84.8 |
| 13 | 10.4 | 1.5 | 1 6.7 | 3.0 | ¹ 11.9 | 28.9 | 41.5 | ⁴51.5 |
| | 3.3 | 14.1 | 21.1 | 21.9 | 33.7 | 54.4 | 568.2 | ⁵75.6 |
| 16 | 0.4 | 0.0 | 1 4.4 | 1.9 | 12.2 | 26.7 | ⁶ 38.2 | 448.2 |
| | 4.1 | 10.7 | 17.0 | 17.8 | 32.6 | 50.0 | ⁷ 63.0 | 667.8 |
| 19 | 0.0 | 0.4 | 3.7 | 1.9 | 11.1 | 25.9 | 37.0 | 50.7 |
| | 4.4 | 13.0 | 16.7 | 19.3 | 30.7 | 49.3 | 62.6 | 71.1 |
| 22 | 0.0 | ² 1.1 | 3.3 | 2.2 | ¹ 11.1 | ¹ 27.0 | ¹ 37.0 | ¹ 46.3 |
| | 5.6 | 15.6 | 19.6 | 22.6 | 30.7 | 49 .3 | 62.6 | ⁷ 67.0 |

- Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Bitburg/Cologne and Frankfurt/Cologne displayed this percentage.
 Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.
 Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.
- 5. Bitburg/Frankfurt and Bitburg/Hahn displayed this percentage.
- 6. Bitburg/Cologne and Hahn/Cologne displayed this percentage.
 7. Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.
 8. Bitburg/Frankfurt and Frankfurt/Hahn displayed this percentage.

TABLE 21 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR DECEMBER IN PERCENT (Local Standard Time)

1961-1970 (Except DEC 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|--------------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.4 9.3 | ² 1.1 17.6 | ³ 5.7 24.0 | 2.2 25.1 | ³ 14.7 37.6 | ² 34.1 63.1 | ² 48.4 76.3 | 60.9 81.0 |
| 4 | 10.4 | 0.7 | ³ 6.5 | 3.6 | ³ 15.1 | 35.6 | 46.6 | 58.4 |
| | 9.6 | 18.6 | 26.2 | 27.2 | 40.5 | 64.9 | 74.9 | 79.2 |
| 7 | 0.0 | 0.4 | ² 6.8 | 2.5 | ³ 15.4 | 39.1 | 50.2 | 63.1 |
| | 8.6 | 20.4 | 26.2 | 28.3 | 41.6 | 66.7 | 78.1 | 80.7 |
| 10 | 0.4 | ² 1.1 | ³ 11.8 | 3.2 | ³ 23.7 | ³ 49.1 | 58.8 | ³ 68.5 |
| | 11.1 | 16.5 | ⁴ 26.9 | 27.2 | 44.1 | ⁵ 62.7 | ⁶ 77.8 | ⁷ 84.6 |
| 13 | 0.4 | 1.4 | ³ 7.9 | 2.2 | ³ 21.5 | ³ 39.1 | 49.5 | ³ 64.2 |
| | 7.9 | 18.3 | 25.1 | 25.5 | 41.6 | 65.2 | 77.8 | 82.4 |
| 16 | 1.4 | 0.7 | ³ 9.0 | 1.8 | ³ 20.4 | ³ 40.5 | ³ 54.8 | ³ 62.0 |
| | 7.9 | 18.3 | 24.0 | 27.6 | 42.7 | 64.2 | 77.1 | 81.0 |
| 19 | ² 0.0 | 1.8 | ³ 7.5 | 2.9 | ² 17.9 | 34.4 | ² 49.1 | ² 61.3 |
| | 8.6 | 17.9 | 24.4 | 22.2 | 37.3 | 62.4 | 76.3 | 80.7 |
| 22 | 0.0 | 0.4 | ³ 4.7 | ³ 2.5 | ³ 16.1 | ² 31.5 | 43.7 | 56.3 |
| | 6.8 | 14.7 | 18.6 | 22.6 | 36.2 | 61.3 | 73.8 | 79.6 |

- Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Frankfurt/Cologne and Bitburg/Cologne displayed this percentage.
 Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Bitburg/Hahn and Frankfurt/Hahn displayed this percentage.
 Frankfurt/Hahn and Bitburg/Frankfurt displayed this percentage.
 Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.
 Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.

TABLE 22 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR JANUARY IN PERCENT (Local Standard Time)

1961-1970 (Except JAN68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|-----|----------------------|--------------------------|-----------------------------|----------------------|-----------------------------|------------------------------|--|------------------------------|
| 1 | 0.7 | 1.4 | 7.9 | 2.5 | 17.9 | 36.6 | 49.8 | ³ 61.7 |
| | 9.7 | 19.4 | 25.8 | 28.0 | 44.8 | 66.7 | 74.2 | 78.9 |
| 4 | 0.4 | 1 2.5 | ³ 7.5 | 3.2 | 17.6 | 39.8 | 53.1 | 63.1 |
| | 9.7 | 19.0 | 27.2 | 27.6 | 48.0 | 67.4 | 75.6 | 78.9 |
| 7 | 1 0.7 | ³ 1.4 | ³ 7.5 | ³ 3.6 | ³ 19.4 | 36.9 | 52.3 | 65.2 |
| | 8.6 | 17.9 | 27.2 | 26.9 | 44.8 | 72.0 | 80.7 | 84.6 |
| 10 | ² 1.8 | ³ 1.4 | ³ 12.9 | 3.2 | ³ 29.0 | 51.3 | ⁵ 62.4 | ³ 70.3 |
| | 10.4 | 20.8 | ⁴ 33.7 | 29.0 | 55.2 | 73.1 | 79.9 | ⁶ 84.6 |
| 13 | ³ 1.1 5.7 | ³ 1.4 17.6 | ³ 12.2 26.5 | 2.2 24.4 | ³ 24.7 43.4 | 39.8 64.9 | ³ 51.3 ⁴ 75.3 | ³59.5 "78.9 |
| 1,6 | 1 0.4 | 1 1.4 | 10.0 | 3.6 | ³ 20.8 | ³ 35.5 | ³ 45.9 | ³ 56.6 |
| | 4 5.4 | 14.0 | *24.4 | 21.9 | 41.9 | 61.7 | 72.7 | 77.8 |
| 19 | ³ 0.4 | ³ 1.4 | ³ 7.9 | ³ 2.9 | ³ 17.2 | 37.3 | ³ 48.4 | ³ 61.3 |
| | 5.4 | 16.1 | 23.3 | 24.0 | 39.1 | 58.8 | 69.5 | 75.6 |
| 22 | 0.0 | 2.2 | ¹ 7.5 | 3.6 | 18.3 | 35.1 | 48.0 | 58.4 |
| | 7.2 | 20.8 | 27.2 | 28.7 | 41.6 | 59.5 | 69.2 | 74.6 |

Frankfurt/Cologne and Bitburg/Cologne displayed this percentage.
 Frankfurt/Cologne and Hahn/Cologne displayed this percentage.
 Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.
 Hahn/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.

TABLE 23 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR FEBRUARY IN PERCENT (Local Standard Time)

1961-1970 (Except FEB 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C≤800 FT &70R V≤ 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.4 | 0.4 | * 5.2 | 2.0 | ¹ 15.9 | 27.0 | 142.1 | 52.0 |
| | 3.2 | 9.9 | 15.5 | 14.3 | 30.6 | 47.6 | 61.9 | 69.4 |
| 4 | 0.4 | 0.8 | 7.5 | 2.4 | 14.3 | 33.7 | 45.6 | 54.0 |
| | 4.4 | 13.1 | 21.4 | 18.3 | 37.3 | 56.8 | 70.6 | 75.4 |
| 7 | 10.4 | 8 1.6 | 9.5 | 2.4 | ¹ 18.3 | 34.1 | 41.7 | 54.8 |
| | 23.2 | 11.9 | 25.8 | 19.8 | 40.5 | 61.1 | 74.2 | 79.4 |
| 10 | 10.8 | 1 1.2 | ¹ 15.5 | 2.0 | ¹ 24.2 | ¹ 42.1 | ¹ 50.4 | 862.7 |
| | 34.0 | 11.1 | 25.8 | 21.0 | 44.4 | 59.1 | 72.2 | 79.0 |
| 13 | 50.8 | 0.4 | 7.5 | 0.8 | ¹ 16.7 | 31.4 | 44.4 | ¹ 52.8 |
| | 51.6 | 7.9 | 17.1 | 14.7 | 30.2 | 49.2 | 66.7 | 73.0 |
| 16 | 60.4 | 1 0.4 | 1 6.4 | 8 1.2 | ¹ 11.5 | 23.0 | ¹ 34.1 | 44.4 |
| | 31.6 | 5.2 | 214.3 | 9.1 | 21.4 | 43.3 | 57.5 | 66.7 |
| 19 | 70.0 | 1 0.4 | 1 5.2 | 8 1.6 | ¹ 13.1 | 25.8 | ¹ 37.3 | 50.8 |
| | 1.6 | 4.8 | 11.1 | 9.1 | 28.6 | 47.6 | 61.1 | 66.7 |
| 22 | ⁶ 0.4 | 8 0.4 | 1 4.4 | 1 0.8 | ¹ 10.7 | ¹26.6 | ¹ 35.7 | 44.8 |
| | 2.4 | 6.8 | 11.5 | 11.1 | 26.6 | 44.1 | 58.7 | 66.3 |

- Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.
 Frankfurt/Hahn and Bitburg/Hahn displayed this percentage.

- Three station combinations displayed this percentage. Bitburg/Frankfurt and Bitburg/Hahn displayed this percentage

- Bitburg/Cologne and Hahn/Cologne displayed this percentage. Bitburg/Cologne and Bitburg/Frankfurt displayed this percentage. Bitburg/Cologne and Frankfurt/Cologne displayed this percentage.

TABLE 24 TWO STATION PROBABILITIES OF ADVERSE WEATHER FOR JULY IN PERCENT (Local Standard Time)

1961-1970 (Except JUL 68)

| HR | V <u>≪</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4_MI | C<8000 FT &70R V< 5 MI |
|----|------------------|----------------------|-----------------------------|-------------------------|---------------------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 | 0.0 | 4 0.4 | 1.0 0.0 | ⁹ 2.2 | 9 6.8 | ³ 14.3 | ⁹ 21.2 |
| | 0.4 | 3 1.1 | 1.8 | 1.8 | 5.4 | 410.0 | ³ 17.9 | ¹¹ 28.7 |
| 4 | ² 0.0 | 0.0 | 1.1 | ³ 0.4 | ³ 7.2 | ⁹ 16.9 | ⁹ 24.7 | ⁹ 35.8 |
| | ³ 0.7 | 6 2.9 | 5.4 | 3.6 | ¹¹ 10.0 | ⁷ 22.2 | ¹² 30.1 | ⁷ 44.1 |
| 7 | 40.0 | ³ 0.4 | 8 3.9 | 0.4 | 812.2 | 822.2 | 829.4 | ⁸ 42.3 |
| | 1.8 | ³ 2.2 | 5 7.5 | 3.6 | 619.0 | 533.0 | 540.9 | ⁵ 55.6 |
| 10 | 10.0 50.4 | 0.0 2.2 | ³ 2.9 | 10 0.4 3.2 | ¹⁰ 3.9 ³ 6.8 | 913.3 719.0 | 25.1 38.0 | ^{1 3} 35.1 42.3 |
| 13 | 0.0 | ² 0.0 | 8 0.0 | 1 0.4 | ³ 1.1 | 4.3 | 13.3 | 21.9 |
| | 0.0 | ³ 0.4 | 7 1.4 | 1.1 | ³ 2.2 | 10.0 | 33.0 | 38.4 |
| 16 | 0.0 | 0.0 | ³ 0.0 | 1 0.0 | 10 0.7 | ¹⁰ 3.6 | 9.7 | ³ 15.8 |
| | 0.0 | 0.0 | ² 0.4 | 0.4 | 3 2.2 | ⁷ 5.4 | 17.9 | 25.1 |
| 19 | 0.0 0.0 | ⁷ 0.4 | 4 0.4 3 1.1 | ² 0.0 0.7 | ³ 1.4 ⁷ 2.5 | 2.5 5.4 | 5.7 13.6 | 11.8 21.2 |
| 22 | 0.0 | 4 0.0 | 9 0.0 | ³ 0.0 | ⁹ 1.1 | ⁹ 3.6 | ³ 10.0 | ⁹ 15.8 |
| | 0.0 | 4 0.4 | 3 1.4 | ³ 0.7 | 2.9 | ⁷ 10.4 | 14.3 | ⁷ 26.5 |

- 1. Five station combinations displayed this percentage.
- 2. Four station combinations displayed this percentage.
- Two station combinations displayed this percentage.
- 4. Three station combinations displayed this percentage.
- 5. Bitburg/Cologne was the "worst" station combination instead of Bitburg/Hahn.
- 6. Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.
- 7. Hahn/Cologne was the "worst" station combination instead of Bitburg/Hahn.
- Frankfurt/Hahn was the "best" station combination instead of Frankfurt/Cologne.
- 9. Bitburg/Frankfurt was the "best" station combination instead of Frankfurt/Cologne.
 10. Bitburg/Cologne was the "best" station combination instead of Frankfurt/Cologne.
 11. Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.

- 12. Frankfurt/Cologne was the "worst" station combination instead of Bitburg/Hahn.
- 13. Hahn/Cologne was the "best" station combination instead of Bitburg/Hahn.

TABLE 25 THREE STATION PROBABILITIES OF ADVERSE WEATHER ANNUAL SUMMARY IN PERCENT (Local Standard Time)

1961-1970 (Except SEP 67-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.1 0.6 | 0.3 1.6 | 2.4 | 0.9 3.1 | 7.0 12.6 | 15.5 23.3 | 24.1 34.8 | ¹ 35.4 41.5 |
| 4 | ² 0.2 | 0.5 | 3.2 | 1.0 | 9.0 | 20.7 | 30.4 | 40.8 |
| | 1.0 | 2.2 | 6.7 | 3.7 | 16.0 | 29.1 | 42.2 | 49.7 |
| 7 | 0.5 | 0.5 | 1 6.3 | 1.2 | ¹ 15.0 | ¹ 28.6 | ¹ 38.0 | ¹ 49.3 |
| | 1.4 | 2.4 | 9.3 | 4.4 | 21.7 | 37.3 | 49.9 | 58.1 |
| 10 | 0.2 | 0.4 | 4.9 | 0.9 | 12.6 | ¹ 27.5 | 36.0 | ¹ 45.6 |
| | 1.3 | 2.3 | 8.5 | 4.7 | 19.7 | 34.8 | 49.0 | 56.4 |
| 13 | ³ 0.1 | 0.3 | 2.7 | 0.5 | 6.9 | 15.3 | 26.1 | 35.0 |
| | 0.4 | 1.4 | 5.2 | 2.9 | 11.3 | 22.5 | 40.2 | 46.9 |
| 16 | 0.1 | 1 0.2 | 2.1 | 0.4 | 5.4 | 12.5 | 20.6 | 27.5 |
| | 0.5 | 1.2 | 4.0 | 2.3 | 10.0 | 19.1 | 31.5 | 37.9 |
| 19 | *0.1 | 1 0.3 | 1.8 | 0.6 | 5.5 | 13.2 | 20.4 | 29.5 |
| | 0.3 | 1.2 | 3.9 | 2.4 | 10.4 | 19.8 | 30.6 | 37.9 |
| 22 | 0.0 | 1 0.3 | 1.3 | 0.6 | 5.4 | 13.1 | 20.7 | 28.7 |
| | 0.3 | 1.2 | 3.7 | 3.0 | 10.2 | 19.8 | 30.2 | 37.2 |

1. Bitburg/Frankfurt/Cologne displayed the same percentage as

Frankfurt/Hahn/Cologne.

Frankfurt/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

Bitburg/Frankfurt/Cologne displayed the same percentage as Bitburg/Hahn/Cologne.

4. The actual percentage was 0.03%.

TABLE 26 THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR SEP-OCT-NOV IN PERCENT (Local Standard Time)

1961-1970 (Except SEP-NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C≤500 FT &70R V≤ 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.2 | 0.9 | ³ 3.4 | 1 1.6 | 10.1 | 20.6 | 28.6 | 38.7 |
| | 20.9 | 2.3 | 6.8 | 4.0 | 18.0 | 30.2 | 41.6 | 48.7 |
| 4 | 10.4 | 0.9 | ³ 5.0 | 1 1.6 | ³ 12.1 | 24.8 | ¹ 35.3 | ³ 45.3 |
| | 1.6 | 2.6 | 9.9 | 4.0 | 22.8 | 37.2 | 50.3 | 57.1 |
| 7 | 1.1 | 1.3 | ³ 10.6 | 2.1 | ³ 19.3 | ³ 32.5 | ³ 42.9 | ³ 53.1 |
| | 3.3 | 4.3 | 15.8 | 5.9 | 30.3 | 45.9 | 57.5 | 64.6 |
| 10 | ³ 0.5 | 1.1 | ¹ 7.2 | 1.8 | ³ 16.4 | 31.8 | ³ 39.2 | ³ 49.8 |
| | 2.3 | 4.0 | 11.5 | 6.0 | 27.0 | 44.7 | 57.9 | 63.9 |
| 13 | *0.0 | 0.4 | 3.1 | 0.6 | ³ 7.5 | ³ 18.2 | ³ 27.1 | ³ 36.9 |
| | 0.4 | 1.5 | 5.3 | 3.3 | 13.4 | 27.4 | 42.4 | 49.9 |
| 16 | 0.0 | 1 0.0 | 1.3 | 0.2 | 5.0 | 13.8 | 20.5 | 28.5 |
| | 0.5 | 1.1 | 3.4 | 1.6 | 10.3 | 21.4 | 32.6 | 38.7 |
| 19 | 10.0 | 1 0.1 | 1.6 | 0.4 | 5.9 | 16.2 | 22.8 | 34.3 |
| | 20.4 | 1.6 | 4.3 | 3.1 | 12.3 | 24.2 | 33.8 | 42.4 |
| 22 | 0.0 | 1 0.4 | 1.8 | ³ 0.6 | ³ 8.1 | 16.1 | 23.4 | 33.2 |
| | 0.5 | 2.0 | 5.6 | 3.7 | 13.7 | 24.8 | 34.4 | 41.9 |

- 1. Bitburg/Frankfurt/Cologne displayed the same percentage as Frankfurt/Hahn/Cologne.
- Bitburg/Frankfurt/Hahn displayed the same percentage as
 Bitburg/Hahn/Cologne.
 Frankfurt/Hahn/Cologne was the "best" station combination instead of
 Bitburg/Frankfurt/Cologne.
 Bitburg/Frankfurt/Cologne displayed the same percentage as
 Bitburg/Hahn/Cologne.

TABLE 27 THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR DEC-JAN-FEB IN PERCENT (Local Standard Time)

1961-1970 (Except DEC 67-FEB 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800`FT &70R V< 3_MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.1 | 0.4 | 4.3 | 1.6 | 13.1 | 28.8 | 42.4 | 53.8 |
| | 1.4 | 4.0 | 11.0 | 7.5 | 24.8 | 44.3 | 60.4 | 67.3 |
| 4 | ² 0.3 | 0.7 | 4.4 | 2.0 | 13.0 | 32.6 | 44.7 | 54.6 |
| | 2.0 | 5.1 | 12.5 | 8.4 | 26.3 | 45.4 | 63.0 | 69.5 |
| 7 | 0.3 | 0.5 | 5.7 | 1.9 | 14.1 | 32.1 | 45.1 | 58.3 |
| | 1.6 | 4.6 | 12.4 | 8.9 | 27.4 | 47.7 | 65.7 | 72.2 |
| 10 | 0.5 | 0.4 | 10.5 | 1.1° | 22.5 | 43.2 | 53.8 | 63.7 |
| | 2.8 | 4.2 | 19.5 | 9.1 | 36.8 | 55.4 | 70.5 | 77.9 |
| 13 | ³ 0.5 | 0.9 | 7.2 | 1.2 | 17.4 | 31.5 | 44.3 | 55.1 |
| | 1.2 | 4.2 | 14.9 | 7.0 | 28.2 | 47.3 | 65.2 | 70.6 |
| 16 | 0.4 | 0.7 | 6.7 | 1.2 | 14.3 | 28.8 | 41.5 | 51.0 |
| | 1.5 | 3.7 | 12.4 | 7.0 | 26.2 | 43.8 | 59.4 | 67.5 |
| 19 | 40.1 | 1.0 | 4.6 | 1.6 | 12.9 | 27.9 | 39.9 | 53.0 |
| | 1.0 | 3.0 | 9.9 | 5.7 | 24.2 | 41.9 | 58.4 | 66.7 |
| 22 | 0.0 | 0.7 | 3.2 | 1.9 | 12.2 | 26.7 | 39.1 | 49.5 |
| | 0.6 | 2.4 | 8.4 | 7.3 | 23.1 | 41.2 | 58.3 | 65.7 |

1. Frankfurt/Hahn/Cologne was the "best" station combination instead of

Bitburg/Frankfurt/Cologne.

Frankfurt/Hahn/Cologne displayed the same percentage as Bitburg/Frankfurt/Cologne.

Three station combinations displayed the same percentage.

Bitburg/Frankfurt/Cologne displayed the same percentage as Bitburg/Hahn/Cologne.

TABLE 28

THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR MAR-APR-MAY IN PERCENT (Local Standard Time)

1961-1970 (Except MAR-MAY 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 0.2 | 0.1 1 0.2 | 0.7 | 0.1 0.7 | 3.0 4 5.4 | 8.1 414.1 | 17.3 26.0 | 26.8 33.2 |
| 4 | ² 0.2 | 0.1 | 1.5 | ² 0.1 | 5.6 | 14.3 | 23.8 | 35.0 |
| | ³ 0.4 | 0.9 | 3.1 | 1.7 | 3 9.1 | 20.5 | 34.5 | 41.8 |
| 7 | 0.1 | 0.0 | 4.6 | 0.7 | 15.2 | ⁶ 26.3 | ⁶ 36.1 | 48.6 |
| | 0.6 | 0.6 | 4.6 | 1.9 | 17.6 | 31.9 | 45.8 | 55.0 |
| 10 | 10.0 10.1 | 0.1 1.0 | 1.6 | 0.4 2.1 | 8.0 11.5 | 21.6 26.9 | ⁶ 31.3 42.4 | ⁶ 42.5 51.8 |
| 13 | 0.0 | 1 0.0 | 0.4 | ² 0.0 | 1.9 | 8.1 | 21.0 | 30.3 |
| | 0.0 | 4 0.1 | 1.2 | 1.2 | 3.5 | 11.5 | 36.0 | 43.0 |
| 16 | 0.0 | 1 0.0 | 1 0.5 | 0.1 | 2.2 | 5.6 | 14.0 | 20.5 |
| | 0.0 | 5 0.1 | 5 0.6 | 0.6 | 3.4 | 7.9 | 24.0 | 30.3 |
| 19 | 0.0 | ² 0.0 | 6 0.6 | 1 0.1 | 2.4 | 7.3 | 15.3 | 23.6 |
| | 0.0 | 0.2 | 3 1.3 | 0.9 | 4.1 | 11.0 | 23.3 | 30.8 |
| 22 | 0.0 | ³ 0.0 | ² 0.2 | ² 0.0 | 1.7 | 6.9 | 14.4 | 21.3 |
| | 0.1 | 0.4 | 1.1 | 1.0 | 4 3.5 | 10.6 | 20.2 | 27.9 |

- 1. Three stations displayed the same percentage.
- 2. Bitburg/Frankfurt/Cologne displayed the same percentage as Frankfurt/Hahn/Cologne.
- 3. Bitburg/Frankfurt/Hahn displayed the same percentage as Bitburg/Hahn/Cologne.
- 4. Bitburg/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- 5. Frankfurt/Hahn/Cologne was the "worst" station combination instead of Rithurg/Frankfurt/Hahn
- Bitburg/Frankfurt/Hahn.

 6. Frankfurt/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

TABLE 29

THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR JUN-JUL-AUG IN PERCENT (Local Standard Time)

1961-1970 (Except JUN-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------------------------|----------------------|-----------------------------|-------------------------|-----------------------------|--|------------------------------|--|
| 1 | 10.0 0.1 | 5 0.0 1 0.1 | ⁵ 0.4 4 1.1 | ⁵ 0.1 0.4 | 1.8 | 4.8 7.6 | 8.5 12.0 | 14.0 18.5 |
| 4 | ² 0.0 ³ 0.2 | 0.1 0.4 | 1.6 | 5 0.2 4 1.0 | 4.7 7 6.3 | 11.5 713.9 | 18.1 21.6 | 27.5 *31.2 |
| 7 | 10.2 10.6 | 6 0.9 | ² 3.3 5.1 | , 0.2 , 1.1 | ² 9.1 11.7 | ² 20.5 ⁷ 23.9 | ⁶ 26.3 31.0 | ² 36.2 ³ 42.2 |
| 10 | 10.0 0.1 | 0.0 4 0.4 | 5 0.6 4 1.3 | 0.2 ⁻ 1.7 | 2.8 4.7 | 10.8 *13.9 | ⁵ 18.8 25.7 | ² 25.7 32.7 |
| 13 | 0.0 0.0 | 1 0.0 6 0.1 | , 0.1 , 0.2 | 8 0.0 6 0.2 | 9 0.5 2 1.1 | 3.1 5.8 | 11.5 17.6 | 17.0 24.6 |
| 16 | 0.0 0.0 | 0.0 0.1 | 1 0.0 4 0.4 | 1 0.0 4 0.1 | 0.1 1.0 | 2.3 4.0 | 6.6 10.8 | 10.6 15.6 |
| 19 | 0.0 0.0 | 5 0.0 7 0.1 | 6 0.6 | 5 0.1 7 0.2 | 1.0 | 1.8 3.7 | 4.0 7.5 | 7.7 12.6 |
| 22 | 0.0 0.0 | 1 0.0 4 0.2 | * 0.0 * 1.0 | 1 0.0 4 0.2 | 0.7 2.2 | 3.1 5.8 | 6.3 9.4 | 11.1 14.7 |

- 1. Three stations displayed the same percentage.
- Frankfurt/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.
- Bitburg/Frankfurt/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- Bitburg/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- Bitburg/Frankfurt/Cologne displayed the same percentage as Frankfurt/Hahn/Cologne.
- Frankfurt/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- Bitburg/Frankfurt/Hahn displayed the same percentage as Bitburg/Hahn/Cologne.
- Bitburg/Frankfurt/Hahn displayed the same percentage as Bitburg/Frankfurt/Cologne. Bitburg/Frankfurt/Hahn was the "best" station combination instead of
- Bitburg/Frankfurt/Cologne.

TABLE 30

THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR SEPTEMBER IN PERCENT

(Local Standard Time)

1961-1970 (Except SEP 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------------------------|-------------------------|-----------------------------|---------------------------|--------------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 20.4 | 0.0 2 0.7 | 7 0.4 2 3.7 | 1 0.0 2 0.7 | ⁷ 3.7 8.9 | 12.6 15.6 | ⁷ 16.3 21.5 | ⁷ 26.7 28.5 |
| 4 | 10.0 | 0.0 | ⁷ 2.2 | ³ 0.0 | ⁷ 9.3 | ⁷ 17.8 | ⁷ 23.7 | ⁷ 31.9 |
| | 20.7 | 3 0.7 | 5.9 | 1.9 | 17.4 | 24.1 | 31.1 | 38.9 |
| 7 | ³0.4 | 0.0 | ⁷ 9.3 | ³ 0.4 | ⁷ 18.2 | ⁷ 27.4 | ⁷ 31.1 | ⁷ 41.9 |
| | '1.9 | 4 0.7 | 11.5 | ² 1.5 | ¹ ⁰ 24.8 | ¹⁰ 36.3 | ⁸ 40.8 | ¹⁰ 53.0 |
| 10 | ⁵ 0.0 ⁶ 0.4 | ³ 0.4 1.5 | 2.6 2 6.7 | ³ 0.4 2.2 | 10.0 15.2 | ⁷ 20.7 27.8 | ⁷ 26.7 40.0 | ⁷ 35.2 45.2 |
| 13 | 0.0 | 1 0.0 | 4 0.4 | 1 0.0 | ³ 2.6 | 7.8 | ⁷ 15.6 | ⁷ 23.7 |
| | 0.0 | 0.7 | 6 1.1 | 0.7 | 4.1 | ² 13.0 | 25.2 | 33.3 |
| 16 | 0.0 | 0.0 | ⁸ 0.0 | 1 0.0 | ³ 0.7 | 4.1 | ⁷ 7.4 | ⁷ 14.4 |
| | 0.0 | 0.0 | ⁹ 0.4 | 2 0.4 | ² 2.6 | 2 7.8 | 13.7 | 19.3 |
| 19 | 0.0 | 1 0.0 | ² 1.1 | ³ 0.0 | ³ 3.0 | 7.0 | 10.0 | 19.6 |
| | 0.0 | 2 0.4 | ² 2.6 | 4 0.4 | 4.8 | 9.3 | 14.1 | 23.0 |
| 22 | 0.0 0.0 | 0.0 2 0.4 | 1 0.4 2 1.5 | ³ 0.0 4 0.4 | ³ 3.3 5.2 | 7.8 10.7 | 10.0 13.7 | 17.8 ² 22.6 |

- 1. Three station combinations displayed this percentage.
- Bitburg/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- 3. Bitburg/Frankfurt/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.
- 4. Bitburg/Frankfurt/Hahn and Bitburg/Hahn/Cologne displayed this percentage.
- 5. Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage.
- 6. Bitburg/Frankfurt/Hahn and Frankfurt/Hahn/Cologne displayed this percentage.
- Frankfurt/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.
- 8. Bitburg/Frankfurt/Hahn and Bitburg/Frankfurt/Cologne displayed this percentage.
- 9. Bitburg/Hahn/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.
- Bitburg/Frankfurt/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.

TABLE 31

THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR OCTOBER IN PERCENT

(Local Standard Time)

1961-1970 (Except OCT 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|--------------------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.7 21.8 | 1 0.7 2.9 | ³ 5.0 9.0 | 2.2 2 3.9 | 13.6 22.6 | ⁹ 26.2 36.9 | 433.3 48.0 | 45.2 54.8 |
| 4 | ¹0.7 | 1.1 | ³ 7.5 | 2.5 | 415.4 | 30.8 | 41.9 | ³ 53.1 |
| | 3.2 | 6 3.2 | 11.1 | 2 5.4 | 24.7 | 42.7 | 57.7 | 64.8 |
| 7 | ³2.9 | 2.2 | ³ 16.5 | 2.9 | ⁴ 25.8 | ³ 41.5 | ³ 52.0 | ³ 61.7 |
| | 6.1 | 6.1 | 21.9 | 7.2 | 38.7 | 53.4 | 67.4 | 75.3 |
| 10 | ³ 0.7 | 1 1.4 | ³ 9.0 | 1 2.9 | ⁸ 21.9 | ³ 35.8 | ³42.3 | ³ 53.4 |
| | 3.2 | 5.4 | 12.2 | 7.5 | 32.6 | 50.5 | 60.6 | 67.4 |
| 13 | *0.0 0.4 | 0.0 | ⁷ 3.9 ² 5.0 | * 0.4 2.5 | ³ 8.2 14.7 | ³20.8 29.8 | 28.0 41.2 | ¹ 38.4 48.0 |
| 16 | 0.0 | * 0.0 | ³ 0.7 | 1 0.0 | 1 4.3 | 13.3 | ¹ 17.9 | 25.5 |
| | 0.0 | 0.4 | 1.8 | 1.1 | 7.2 | 18.3 | 27.2 | 35.5 |
| 19 | °0.0 | 0.0 | 0.7 | 1 0.0 | 5.7 | 19.Q | 25.1 | ¹ 36.2 |
| | 0.4 | 1.1 | 2 3.9 | 2.2 | 11.5 | 25.5 | 34.8 | 41.9 |
| 22 | ⁵0.0 | * 0.4 | 2.2 | 4 0.4 | 8.6 | 16.9 | 25.8 | ³39.4 |
| | 0.7 | 2.5 | 6.5 | 2.9 | 15.4 | 25.5 | 36.6 | 48.0 |

- Bitburg/Frankfurt/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.
- Bitburg/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- Frankfurt/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.
- Three station combinations displayed this percentage. Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage.
- Bitburg/Frankfurt/Hahn and Bitburg/Hahn/Cologne displayed this percentage. Bitburg/Frankfurt/Hahn and Frankfurt/Hahn/Cologne displayed this percentage.
- 8. Bitburg/Hahn/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.
- Bitburg/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

TABLE 32 THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR NOVEMBER IN PERCENT (Local Standard Time)

1961-1970 (Except NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 | ⁵ 1.5 | ⁵ 4.8 | ⁵ 2.2 | 11.5 | 21.9 | 34.4 | 43.7 |
| | 1.1 | 4.1 | 10.0 | 8.5 | 22.2 | 37.8 | 55.2 | 62.6 |
| 4 | 10.4 | 1.5 | 4.8 | ⁵ 1.9 | ⁵ 11.5 | 23.0 | 36.3 | 49.3 |
| | 1.5 | 3.7 | 12.6 | 6.3 | 26.3 | 44.8 | 61.9 | 67.4 |
| 7 | 10.0 | 1.9 | 5.2 | 3.0 | ¹ 13.7 | ⁵ 28.2 | ⁵ 45.2 | ⁵55.6 |
| | 1.9 | 5.9 | 13.7 | 9.3 | 27.8 | 49.3 | 64.1 | 68.5 |
| 10 | 0.4 | 1.5 | ⁵ 8.5 | 2.2 | ⁵ 16.7 | ⁵38.5 | ⁵ 48.5 | ⁵60.7 |
| | 3.3 | 5.2 | 17.4 | 8.2 | 33.0 | 55.6 | 73.0 | 78.9 |
| 13 | ² 0.0 | 0.7 | 4.4 | 1.5 | 10.7 | ⁵ 25.2 | ⁵ 37.8 | ⁵48.5 |
| | 0.7 | 3.3 | 10.7 | 6.7 | 21.5 | 41.9 | 60.7 | 68.5 |
| 16 | 0.0 | 1 0.0 | 3.0 | 0.7 | 10.0 | 24.1 | ⁶ 35.2 | ⁶ 44.4 |
| | 1.5 | 3.0 | 8.5 | 3.7 | 21.5 | 39.3 | 57.0 | 61.5 |
| 19 | 10.0 | 1 0.4 | 3.0 | 1.1 | 8.9 | 22.6 | 33.3 | 47.0 |
| | 31.1 | 3.7 | 7.8 | 6.7 | 20.7 | 37.8 | 52.6 | 62.2 |
| 22 | 10.0 | 1 0.7 | 3.0 | ⁵ 1.5 | 9.3 | 23.7 | 34.4 | 41.9 |
| | 10.7 | 3.3 | 10.0 | 7.8 | 20.4 | 38.2 | 53.0 | 57.4 |

- Bitburg/Frankfurt/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.
- Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage. Bitburg/Hahn/Cologne was the "worst"station combination instead of Bitburg/Frankfurt/Cologne.
- Bitburg/Frankfurt/Hahn and Bitburg/Hahn/Cologne displayed this percentage. Frankfurt/Hahn/Cologne was the "best" station combination instead of
- Bitburg/Frankfurt/Cologne.
 Bitburg/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

TABLE 33 THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR DECEMBER IN PERCENT (Local Standard Time)

1961-1970 (Except DEC 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 | 0.4 | 3.9 | 1.4 | 11.8 | 29.4 | 42.7 | 56.3 |
| | 1.8 | 3.9 | 10.8 | 8.2 | 23.3 | 48.0 | 65.6 | 72.4 |
| 4 | ²0.0 | ² 0.4 | 3.9 | 2.2 | 11.1 | 30.1 | 42.3 | 53.8 |
| | 2.2 | 3.2 | 10.4 | 8.2 | 22.6 | 45.2 | 63.1 | 70.3 |
| 7 | 10.0 | 0.0 | 3.6 | 1.4 | 11.8 | 33.7 | 46.6 | 59.1 |
| | 1.4 | 5.7 | 11.1 | 10.0 | 25.1 | 48.0 | 65.6 | 72.0 |
| 10 | ¹0.0 | 1 0.4 | 9.7 | 1.8 | ⁵ 20.4 | 44.8 | ¹ 54.1 | 63.8 |
| | 3.2 | 4.7 | 19.0 | 9.3 | 33.0 | 55.9 | 71.3 | 79.6 |
| 13 | ³0.4 | 1.1 | 6.1 | 1.4 | 17.6 | 34.1 | 45.5 | 59.5 |
| | 1.8 | 5.0 | 16.5 | 9.7 | 30.5 | 50.9 | 69.5 | 75.6 |
| 16 | 0.7 | 1 0.7 | 7.2 | 1.1 | 15.8 | 34.4 | 50.2 | 57.4 |
| | 2.2 | 5.4 | 13.3 | 10.0 | 29.8 | 50.9 | 67.4 | 75.3 |
| 19 | ³0.0 | 1 1.4 | 5.0 | 1 2.5 | 12.9 | 28.0 | 44.1 | 57.4 |
| | 1.8 | 4.7 | 12.5 | 8.6 | 24.7 | 47.0 | 66.0 | 74.2 |
| 22 | 10.0 | 4 0.4 | 2.2 | 1.8 | 13.3 | 26.9 | ² 40.9 | ² 53.4 |
| | 0.7 | 2.9 | 7.5 | 9.3 | 23.7 | 45.5 | 64.9 | 72.8 |

Bitburg/Frankfurt/Cologne and Frankfurt/Hahn/Cologne displayed this percentage. Frankfurt/Hahn/Cologne was the "best" station combination instead of

Bitburg/Frankfurt/Cologne.
Three station combination displayed this percentage.
Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage.
Bitburg/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

TABLE 34 THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR JANUARY IN PERCENT (Local Standard Time)

1961-1970 (Except JAN 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|-------------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.0 1.4 | 0.4 | 5.0 13.3 | 2.2 9.0 | 15.1 31.5 | 33.7 50.5 | 46.2 62.7 | 57.4 69.2 |
| 4 | ² 0.4 | 1.1 | 4.7 | 2.5 | 15.4 | 37.6 | 50.5 | 60.2 |
| | 2.5 | 6.8 | 15.4 | 10.4 | 31.9 | 49.8 | 66.3 | 72.4 |
| 7 | ³ 0.4 1.8 | 6 0.7 6.1 | ⁶ 5.0 14.3 | 1 2.5 12.2 | 15.8 33.0 | 33.3 53.8 | 49.5 71.0 | ² 63.4 77.1 |
| 10 | 40.7 | 4 0.7 | ⁶ 9.7 | 1.1 | 25.5 | 45.5 | ² 59.1 | 667.0 |
| | 3.6 | 6.5 | 24.4 | 12.2 | 45.9 | 59.9 | 73.8 | 80.7 |
| 13 | ³ 0.7 | 1.4 | ³ 10.4 | * 2.2 | ² 21.9 | 34.4 | 47.7 | 56.6 |
| | 1.8 | 5.0 | 18.3 | 8.2 | 33.7 | 53.1 | 68.8 | 72.4 |
| 16 | 0.0 | 1 0.7 | 7.5 | 2.2 | 17.9 | 32.3 | 42.3 | 53.1 |
| | 1.4 | 4.3 | 15.4 | 8.2 | 33.3 | 48.8 | 62.4 | 69.5 |
| 19 | ³ 0.4 | 6 0.7 | 5.0 | 1.8 | 13.6 | 33.0 | 43.0 | 55.6 |
| | 1.1 | 2.9 | 11.1 | 6.1 | 27.6 | 45.2 | 58.4 | 66.7 |
| 22 | ² 0.0 | 1 1.1 | 4.3 | 3.2 | 14.4 | 30.8 | 44.1 | 53.8 |
| | ⁵ 0.4 | 2.5 | 11.5 | 9.3 | 28.3 | 44.8 | 59.5 | 66.3 |

1. Frankfurt/Hahn/Cologne was the "best" station combination instead of

Frankfurt/Hann/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.
 Frankfurt/Hann/Cologne and Bitburg/Frankfurt/Cologne displayed this percentage.
 Three station combinations displayed this percentage.
 Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage.
 Bitburg/Frankfurt/Hahn and Bitburg/Hahn/Cologne displayed this percentage.
 Bitburg/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

TABLE 35 THREE STATION PROBABILITIES OF ADVERSE WEATHER FOR FEBRUARY IN PERCENT (Local Standard Time)

1961-1970 (Except FEB 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 10.4 | ² 0.4 | ³ 4.0 | 1.2 | 12.3 | 22.6 | 37.7 | 47.2 |
| | 20.8 | 3.2 | 8.7 | 5.2 | 19.1 | 33.3 | 52.0 | 59.5 |
| 4 | 0.0 | 0.4 | 4.8 | 1.2 | 12.3 | 29.8 | 41.0 | 49.2 |
| | 1.2 | 5.2 | 11.5 | 6.4 | 24.2 | 40.9 | 59.1 | 65.5 |
| 7 | ³ 0.4 | 0.4 | 7.9 | 1.2 | 14.7 | 29.0 | 38.5 | 51.6 |
| | 1.6 | 1.6 | 11.5 | 4.0 | 23.8 | 40.5 | 59.9 | 67.1 |
| 10 | 40.4 | 0.0 | 10.7 | 0.4 | 19.4 | 38.9 | 47.6 | 58.7 |
| | 51.6 | 1.2 | 14.7 | 5.6 | 31.0 | 50.0 | 65.9 | 73.0 |
| 13 | 60.0 | 0.0 | 4.8 | 0.0 | 12.3 | 25.4 | 39.3 | 48.4 |
| | 0.4 | 2.4 | 9.5 | 2.8 | 19.4 | 36.9 | 56.4 | 63.1 |
| 16 | ⁷ 0.4 | 7 0.4 | 4.4 | 0.4 | ³ 8.7 | 18.7 | 31.0 | 41.7 |
| | 0.8 | 1.2 | 7.9 | 2.4 | 14.3 | 30.6 | 47.2 | 56.8 |
| 19 | ⁷ 0.0 | ³ 0.4 | 3.6 | 0.4 | 11.9 | 22.2 | 31.8 | 45.2 |
| | 0.4 | 1.2 | 5.6 | 2.0 | 19.8 | 32.5 | 50.0 | 58.3 |
| 22 | 0.0 | ⁷ 0.4 | 3.2 | 0.4 | 8.7 | 21.8 | 31.0 | 40.1 |
| | 0.8 | 1.6 | 6.0 | 2.8 | 16.7 | 32.5 | 49.6 | 57.1 |

Bitburg/Frankfurt/Hahn and Bitburg/Hahn Cologne displayed this percentage.
 Bitburg/Frankfurt/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.

Bitburg/Frankfurt/Cologne and Frankfurt/Hann/Cologne displayed this percentage. Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage. Bitburg/Frankfurt/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne. Bitburg/Frankfurt/Hahn and Frankfurt/Hahn/Cologne displayed this percentage. Bitburg/Frankfurt/Hahn was the "best" station combination instead of

Bitburg/Frankfurt/Cologne.

Three station combinations displayed this percentage.

TABLE 36
THREE STATION PROBABILITIES OF ADVERSE WEATHER

FOR JULY IN PERCENT

(Local Standard Time)

1961-1970 (Except JUL 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|--------------------------------------|-----------------------------|----------------------|-----------------------------|--------------------------------------|------------------------------|------------------------------|
| 1 | 0.0 0.0 | 0.0 0.0 | 0.0 1 0.4 | 0.0 0.4 | 0.7 | 3.9 1 6.5 | 8.6 1010.0 | 14.0 8 18.6 |
| 4 | 0.0 | 0.0 | 4 0.0 | ² 0.0 | 4 3.6 | 11.5 | 18.3 | 28.0° |
| | 0.0 | 1 0.4 | 1 1.8 | ³ 0.4 | 5.0 | 8 13.6 | 8 20.4 | 831.9 |
| 7 | 0.0 | 0.0 | 1 1.4 | 0.0 | 4 7.5 | ⁴ 17.6 | ⁴ 24.0 | 435.1 |
| | 10.4 | 1 0.7 | 1 4.3 | 1 0.7 | 6 10.4 | ¹ 23.3 | ¹ 31.2 | 44.8 |
| 10 | 0.0 0.0 | ² 0.0 ³ 0.4 | 0.7 1 1.4 | 0.0 1.1 | ³ 3.2 | 9.0 12.2 | 15.8 23.7 | 25.8 30.1 |
| 13 | 0.0 | 0.0 | 0.0 | 7 0.0 | 5 0.4 | 2.5 | 9.7 | 16.1 |
| | 0.0 | 0.0 | 0.4 | 1 0.4 | 9 1.1 | 5.0 | 17.6 | 26.5 |
| 16 | 0.0 | 0.0 | 0.0 | 0.0 | 9 0.4 | 8 2.5 | 7.2 | 111.1 |
| | 0.0 | 0.0 | 0.0 | 0.0 | 10 1.1 | 8 3.2 | 10.4 | 15.4 |
| 19 | 0.0 0.0 | 0.0 0.0 | 0.4 0.4 | 0.0 0.0 | ⁷ 1.1 1.8 | ² 1.4 ³ 2.5 | * 3.2 7.9 | 7.9 13.3 |
| 22 | 0.0 | 0.0 | 7 0.0 | 7 0.0 | ² 0.4 | 1.8 | 5.7 | 11.5 |
| | 0.0 | 1 0.4 | 1 1.1 | 1 0.4 | ¹ 1.8 | 1 4.7 | 810.4 | 816.1 |

- Bitburg/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- 2. Bitburg/Frankfurt/Cologne and Frankfurt/Hahn/Cologne displayed this percentage.
- 3. Bitburg/Frankfurt/Hahn and Bitburg/Hahn/Cologne displayed this percentage.
- Frankfurt/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.
- Bitburg/Frankfurt/Hahn was the "best" station combination instead of Bitburg/Frankfurt/Cologne.
- Bitburg/Frankfurt/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- 7. Three station combinations displayed this percentage.
- Frankfurt/Hahn/Cologne was the "worst" station combination instead of Bitburg/Frankfurt/Hahn.
- 9. Bitburg/Frankfurt/Cologne and Bitburg/Hahn/Cologne displayed this percentage.
- 10. Bitburg/Frankfurt/Hahn and Frankfurt/Hahn/Cologne displayed this percentage.
- Bitburg/Hahn/Cologne was the "best" station combination instead of Bitburg/Frankfurt/Cologne.

TABLE 37

FOUR STATION PROBABILITIES OF ADVERSE WEATHER
ANNUAL SUMMARY IN PERCENT
(Local Standard Time)

1961-1970 (Except SEP 67-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.1 | 0.3 | 2.0 | 0.8 | 6.6 | 14.6 | 22.7 | 31.2 |
| 4 | 0.2 | 0.3 | 2.6 | 0.9 | 8.0 | 19.1 | 28.2 | 38.1 |
| 7 | 0.3 | 0.4 | 4.7 | 1.1 | 12.7 | 25.9 | 35.6 | 46.7 |
| 10 | 0.2 | 0.3 | 4.0 | 0.8 | 11.0 | 24.5 | 33.4 | 43.0 |
| 13 | 0.1 | 0.3 | 2.3 | 0.4 | 6.2 | 14.4 | 24.4 | 32.7 |
| 16 | 0.1 | 0.2 | 1.8 | 0.4 | 5.1 | 12.1 | 19.2 | 25.8 |
| 19 | ¹ 0.0 | 0.2 | 1.6 | 0.5 | 5.1 | 12.7 | 19.6 | 28.5 |
| 22 | 0.0 | 0.2 | 1.2 | 0.6 | 5.1 | 12.5 | 19.4 | 27.4 |

^{1.} The actual percentage was 0.03%.

TABLE 38

FOUR STATION PROBABILITIES OF ADVERSE WEATHER

FOR SEP-OCT-NOV IN PERCENT

(Local Standard Time)

1961-1970 (Except SEP-NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI_ | C<4500 FT &/OR V< 4 MI_ | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|-------------------------------|-------------------------------|------------------------------|
| 1 | 0.2 | 0.7 | 3.2 | 1.5 | 9.3 | 18.7 | 26.1 | 35.8 |
| 4 | 0.2 | 0.7 | 4.5 | 1.5 | 11.1 | 22.5 | 32.6 | 42.5 |
| 7 | 0.9 | 1.3 | 9.0 | 2.1 | 18.1 | 31.1 | 41.3 | 51.3 |
| 10 | 0.4 | 0.9 | 5.6 | 1.6 | 14.5 | 30.3 | 38.1 | 48.5 |
| 13 | 0.0 | 0.2 | 2.6 | 0.5 | 7.0 | 17.1 | 25.6 | 34.3 |
| 16 | 0.0 | 0.0 | 1.2 | 0.2 | 4.6 | 12.9 | 18.6 | 26.0 |
| 19 | 0.0 | 0.1 | 1.6 | 0.4 | 5.0 | 15.4 | 21.9 | 32.5 |
| 22 | 0.0 | 0.4 | 1.6 | 0.6 | 6.5 | 14.9 | 21.7 | 31.4 |

TABLE 39

FOUR STATION PROBABILITIES OF ADVERSE WEATHER FOR DEC-JAN-FEB IN PERCENT (Local Standard Time)

1961-1970 (Except DEC 67-FEB 68)

| HR | V<1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.1 | 0.4 | 4.0 | 1.6 | 12.8 | 28.0 | 40.9 | 52.1 |
| 4 | 0.1 | 0.6 | 3.7 | 1.9 | 12.6 | 31.6 | 43.5 | 53.1 |
| 7 | 0.1 | 0.1 | 4.1 | 1.5 | 13.3 | 31.7 | 44.4 | 57.0 |
| 10 | 0.4 | 0.4 | 9.0 | 1.1 | 20.5 | 40.9 | 51.6 | 61.7 |
| 13 | 0.4 | 0.9 | 6.5 | 1.2 | 16.2 | 30.6 | 43.2 | 53.6 |
| 16 | 0.4 | 0.6 | 5.9 | 1.1 | 13.7 | 28.4 | 40.3 | 50.1 |
| 19 | 0.1 | 0.9 | 4.1 | 1.4 | 12.5 | 27.7 | 39.3 | 52.4 |
| 22 | 0.0 | 0.6 | 3.0 | 1.9 | 12.0 | 26.2 | 37.9 | 48.8 |

TABLE 40

FOUR STATION PROBABILITIES OF ADVERSE WEATHER
FOR MAR-APR-MAY IN PERCENT
(Local Standard Time)

1961-1970 (Except MAR-MAY 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 0.1 | 0.6 | 0.1 | 2.9 | 7.6 | 16.4 | 25.0 |
| 4 | 0.2 | 0.0 | 1.0 | 0.0 | 4.7 | 13.3 | 21.9 | 32.4 |
| 7 | 0.1 | 0.0 | 3.5 | 0.7 | 12.3 | 23.1 | 33.0 | 45.1 |
| 10 | 0.0 | 0.1 | 1.1 | 0.4 | 6.9 | 18.6 | 27.9 | 39.4 |
| 13 | 0.0 | 0.0 | 0.2 | 0.0 | 1.6 | 7.1 | 19.4 | 28.4 |
| 16 | 0.0 | 0.0 | 0.2 | 0.1 | 1.9 | 5.1 | 12.8 | 19.0 |
| 19 | 0.0 | 0.0 | 0.6 | 0.1 | 2.3 | 6.5 | 14.4 | 22.6 |
| 22 | 0.0 | 0.0 | 0.2 | 0.0 | 1.6 | 6.6 | 12.9 | 19.9 |

TABLE 41

FOUR STATION PROBABILITIES OF ADVERSE WEATHER FOR JUN-JUL-AUG IN PERCENT (Local Standard Time)

1961-1970 (Except JUN-AUG 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 0.0 | 0.2 | 0.0 | 1.7 | 4.4 | 7.7 | 12.6 |
| 4 | 0.0 | 0.0 | 1.2 | 0.1 | 3.6 | 9.4 | 15.2 | 24.9 |
| 7 | 0.1 | 0.1 | 2.2 | 0.2 | 7.1 | 17.9 | 23.8 | 33.6 |
| 10 | 0.0 | 0.0 | 0.4 | 0.2 | 2.3 | 8.8 | 16.3 | 23.1 |
| 13 | 0.0 | 0.0 | 0.1 | 0.0 | 0.4 | 3.0 | 9.8 | 14.9 |
| 16 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 2.2 | 5.6 | 8.5 |
| 19 | 0.0 | 0.0 | 0.2 | 0.1 | 1.0 | 1.7 | 3.5 | 7.0 |
| 22 | 0.0 | 0.0 | 0.0 | 0.0 | 0.6 | 2.8 | 5.4 | 10.0 |

TABLE 42

FOUR STATION PROBABILITIES OF ADVERSE WEATHER FOR SEPTEMBER IN PERCENT (Local Standard Time)

1961-1970 (Except SEP 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 0.0 | 0.4 | 0.0 | 3.7 | 10.4 | 14.4 | 22.2 |
| 4 | 0.0 | 0.0 | 1.9 | 0.0 | 8.5 | 15.6 | 21.9 | 28.5 |
| 7 | 0.4 | 0.0 | 7.8 | 0.4 | 16.7 | 26.3 | 30.0 | 40.4 |
| 10 | 0.0 | 0.4 | 2.6 | 0.4 | 8.5 | 18.5 | 25.2 | 33.7 |
| 13 | 0.0 | 0.0 | 0.4 | 0.0 | 2.6 | 7.4 | 15.2 | 21.9 |
| 16 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 3.7 | 6.7 | 12.6 |
| 19 | 0.0 | 0.0 | 1.1 | 0.0 | 3.0 | 5.9 | 8.5 | 17.4 |
| 22 | 0.0 | 0.0 | 0.0 | 0.0 | 2.6 | 6.7 | 8.5 | 15.9 |

TABLE 43

FOUR STATION PROBABILITIES OF ADVERSE WEATHER

FOR OCTOBER IN PERCENT

(Local Standard Time)

1961-1970 (Except OCT 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C<800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.7 | 0.7 | 5.0 | 2.2 | 13.6 | 24.7 | 30.5 | 42.7 |
| 4 | 0.4 | 1.1 | 7.2 | 2.5 | 14.3 | 30.1 | 40.5 | 50.9 |
| 7 | 2.2 | 2.2 | 14.3 | 2.9 | 24.7 | 40.1 | 49.5 | 60.2 |
| 10 | 0.7 | 0.7 | 7.2 | 2.2 | 19.7 | 34.8 | 40.9 | 52.0 |
| 13 | 0.0 | 0.0 | 2.9 | 0.0 | 7.9 | 20.1 | 25.1 | 34.4 |
| 16 | 0.0 | 0.0 | 0.7 | 0.0 | 3.9 | 12.2 | 15.4 | 22.9 |
| 19 | 0.0 | 0.0 | 0.7 | 0.0 | 4.3 | 18.3 | 24.4 | 34.1 |
| 22 | 0.0 | 0.4 | 1.8 | 0.4 | 7.9 | 15.4 | 23.3 | 36.9 |

TABLE 44

FOUR STATION PROBABILITIES OF ADVERSE WEATHER
FOR NOVEMBER IN PERCENT
(Local Standard Time)

1961-1970 (Except NOV 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &/OR V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 1.5 | 4.1 | 2.2 | 10.4 | 20.7 | 33.3 | 42.2 |
| 4 | 0.4 | 1.1 | 4.4 | 1.9 | 10.4 | 21,5 | 35.2 | 47.8 |
| 7 | 0.0 | 1.9 | 4.8 | 3.0 | 12.6 | 26.7 | 44.1 | 53.0 |
| 10 | 0.4 | 1.5 | 7.0 | 2.2 | 15.2 | 37.4 | 48.2 | 59.6 |
| 13 | 0.0 | 0.7 | 4.4 | 1.5 | 10.4 | 23.7 | 36.7 | 46.7 |
| 16 | 0.0 | 0.0 | 3.0 | 0.7 | 9.3 | 23.0 | 33.7 | 42.6 |
| 19 | 0.0 | 0.4 | 3.0 | 1.1 | 7.8 | 21.9 | 32.6 | 45.9 |
| 22 | 0.0 | 0.7 | 3.0 | 1.5 | 8.9 | 22,6 | 33.3 | 41.1 |

TABLE 45

FOUR STATION PROBABILITIES OF ADVERSE WEATHER

FOR DECEMBER IN PERCENT

(Local Standard Time)

1961-1970 (Except DEC 67)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 0.4 | 3.9 | 1.4 | 11.5 | 28.7 | 42.3 | 55.2 |
| 4 | 0.0 | 0.4 | 2.9 | 1.8 | 11.1 | 28.3 | 41.2 | 52.7 |
| 7 | 0.0 | 0.0 | 2.2 | 1.4 | 10.8 | .33.0 | 46.2 | 58.4 |
| 10 | 0.0 | 0.4 | 8.6 | 1.8 | 19.4 | 41.6 | 50.9 | 61.7 |
| 13 | 0.4 | 1.1 | 6.1 | 1.4 | 15.8 | 33.0 | 43.7 | 58.1 |
| 16 | 0.7 | 0.7 | 6.5 | 1.1 | 15.1 | 34.4 | 49.1 | 56.3 |
| 19 | 0.0 | 1.4 | 4.7 | 2.2 | 12.9 | 27.6 | 43.0 | 57.0 |
| 22 | 0.0 | 0.4 | 1.8 | 1.8 | 13.3 | 26.2 | 39.8 | 52.7 |

TABLE 46

FOUR STATION PROBABILITIES OF ADVERSE WEATHER FOR JANUARY IN PERCENT

(Local Standard Time)

1961-1970 (Except JAN 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 0.4 | 4.7 | 2.2 | 15.1 | 33.0 | 45.2 | 56.3 |
| 4 | 0.4 | 1.1 | 3.9 | 2.5 | 14.7 | 36.9 | 49.1 | 58.1 |
| 7 | 0.0 | 0.4 | 3.6 | 2.2 | 15.1 | 33.0 | 48.8 | 62.0 |
| 10 | 0.7 | 0.7 | 9.0 | 1.1 | 23.7 | 43.7 | 57.0 | 66.0 |
| 13 | 0.7 | 1.4 | 9.0 | 2.2 | 20.4 | 34.1 | 47.3 | 55.2 |
| 16 | 0.0 | 0.7 | 7.2 | 1.8 | 17.9 | 32.3 | 41.9 | 52.3 |
| 19 | 0.4 | 0.7 | 4.7 | 1.4 | 12.9 | 32.6 | 42.3 | 54.8 |
| 22 | 0.0 | 1.1 | 3.9 | 3.2 | 14.0 | 30.5 | 42.7 | 52.7 |

TABLE 47

FOUR STATION PROBABILITIES OF ADVERSE WEATHER

FOR FEBRUARY IN PERCENT

(Local Standard Time)

1961-1970 (Except FEB 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.4 | 0.4 | 3.2 | 1.2 | 11.9 | 21.8 | 34.5 | 44.1 |
| 4 | 0.0 | 0.4 | 4.4 | 1.2 | 11.9 | 29.4 | 39.7 | 48.0 |
| 7 | 0.4 | 0.0 | 6.8 | 0.8 | 14.3 | 29.0 | 37.7 | 50.0 |
| 10 | 0.4 | 0.0 | 9.5 | 0.4 | 18.3 | 36.9 | 46.3 | 57.1 |
| 13 | 0.0 | 0.0 | 4.4 | 0.0 | 11.9 | 24.2 | 38.1 | 46.8 |
| 16 | 0.4 | 0.4 | 4.0 | 0.4 | 7.5 | 17.5 | 28.6 | 40.9 |
| 19 | 0.0 | 0.4 | 2.8 | 0.4 | 11.5 | 22.2 | 31.8 | 44.4 |
| 22 | 0.0 | 0.4 | 3.2 | 0.4 | 8.3 | 21.4 | 30.6 | 40.1 |

TABLE 48

FOUR STATION PROBABILITIES OF ADVERSE WEATHER
FOR JULY IN PERCENT
(Local Standard Time)

1961-1970 (Except JUL 68)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C<800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.7 | 2.9 | 6.8 | 11.8 |
| 4 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 9.3 | 14.7 | 23.7 |
| 7 | 0.0 | 0.0 | 0.7 | 0.0 | 5.7 | 15.1 | 22.2 | 32.3 |
| 10 | 0.0 | 0.0 | 0.7 | 0.0 | 2.2 | 7.5 | 14.7 | 21.9 |
| 13 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 2.5 | 9.3 | 14.7 |
| 16 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 2.2 | 6.1 | 9.0 |
| 19 | 0.0 | 0.0 | 0.4 | 0.0 | 1.1 | 1.1 | 2.9 | 6.8 |
| 22 | 0.0 | 0.0 | 0.0 | 0.0 | 0.4 | 1.8 | 5.4 | 10.8 |

TABLE 49 SINGLE STATION PROBABILITY OF ADVERSE WEATHER AT BITBURG-FRANKFURT-HAHN ANNUAL SUMMARY IN PERCENT (Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 2.8 | 7.7 | 15.2 | 9.4 | 26.4 | 39.2 | 52.1 | 59.0 |
| | 8.8 | 20.0 | 24.8 | 25.6 | 36.9 | 50.9 | 57.8 | 65.2 |
| 4 | 4.4 | 9.2 | 18.9 | 11.3 | 32.0 | 48.2 | 61.3 | 68.0 |
| | 12.1 | 24.1 | 30.2 | 30.1 | 44.6 | 59.3 | 65.1 | 72.0 |
| 7 | 6.1 | 10.8 | 25.9 | 13.1 | 44.0 | 59.9 | ³ 68.9 | ³ 74.9 |
| | 13.9 | 27.2 | 34.7 | 34.6 | 48.9 | ² 63.9 | ² 71.8 | ² 77.9 |
| 10 | 5.5 | 10.1 | ¹ 22.6 | 13.3 | ¹ 37.6 | 56.0 | ³ 66.2 | ³ 71.6 |
| | 10.6 | 22.6 | 28.2 | 29.7 | 41.0 | ² 58.3 | ² 69.9 | ² 75.3 |
| 13 | 3.0 | 7 | ¹ 14.0 | 9.7 | ¹ 23.8 | 37.2 | 56.6 | 63.4 |
| | 6.4 | 16.9 | 20.1 | 22.0 | 29.0 | 45.5 | 462.6 | ² 68.1 |
| 16 | 2.7 | 6.8 | ¹ 11.4 | 8.7 | ¹ 20.7 | 31.4 | 48.0 | 55.0 |
| | 6.2 | 14.4 | 17.7 | 18.7 | 26.4 | 38.6 | 54.6 | 60.5 |
| 19 | 1.8 | 6.5 | 12.4 | 8.3 | 21.9 | 32.5 | 46.3 | 53.9 |
| | 6.1 | 14.8 | 19.0 | 19.3 | 29.9 | 41.3 | 51.9 | 58.8 |
| 22 | 2.1 | 6.9 | 12.7 | 8.6 | 22.5 | 33.8 | 46.6 | ¹ 53.9 |
| | 6.7 | 16.9 | 20.8 | 21.4 | 32.1 | 45.0 | 53.8 | 61.2 |

Bitburg was the "best" station instead of Frankfurt.
 Bitburg was the "worst" station instead of Hahn.
 Hahn was the "best" station instead of Frankfurt.
 Bitburg and Hahn displayed this percentage.

TABLE 50

SINGLE STATION PROBABILITY OF ADVERSE WEATHER AT BITBURG-FRANKFURT-HAHN FOR SEP-OCT-NOV IN PERCENT (Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &/OR V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 5.5 | 9.5 | 22.9 | 11.5 | ¹ 37.4 | ¹ 52.3 | 161.0 | 166.6 |
| | 11.8 | 21.4 | 29.2 | 27.5 | 42.8 | 56.3 | 64.0 | 169.9 |
| 4 | 8.6 | 12.3 | 28.6 | 14.4 | 44.6 | 61.3 | ¹ 70.0 | ¹ 75.9 |
| | 16.4 | 26.9 | 35.4 | 33.1 | 51.7 | 65.4 | ⁴ 72.2 | 76.9 |
| 7 | 12.1 | 17.3 | ² 36.7 | 19.2 | ³ 54.4 | ³ 68.4 | ³ 72.4 | ³ 78.5 |
| | 20.4 | 30.2 | 39.9 | 36.7 | ⁴ 57.8 | ⁵ 73.9 | 482.1 | ⁴ 86.6 |
| 10 | 10.0 | 15.8 | 31.2 | 18.9 | ³ 48.2 | ³ 65.1 | ³ 70.0 | ³ 74.9 |
| | 15.5 | 25.8 | 33.5 | 34.1 | ⁵ 55.6 | ⁵ 70.7 | ⁴ 79.2 | ⁴ 84.4 |
| 13 | 4.6 | 9.6 | 116.2 | 11.9 | ¹ 29.6 | 44.2 | 61.3 | ³ 67.6 |
| | 6.8 | 18.5 | 21.2 | 23.3 | 31.4 | 49.9 | 64.5 | ⁵ 71.4 |
| 16 | 12.6 | 7.0 | ¹ 12.1 | 9.3 | 23.9 | 36.9 | ² 51.9 | ¹ 57.2 |
| | 6.6 | 15.4 | 18.3 | 19.4 | 26.5 | 40.1 | 52.5 | *59.0 |
| 19 | 2.9 | 7.1 | ¹ 14.2 | 9.5 | 126.5 | ¹ 39.9 | 51.8 | 59.1 |
| | 7.5 | 15.0 | 21.5 | 19.4 | 33.1 | 46.9 | 56.0 | 64.1 |
| 22 | 4.0 | 8.9 | ¹ 16.7 | 10.8 | ¹ 29.0 | ¹ 41.9 | ¹ 53.4 | 160.7 |
| | 9.3 | 18.5 | 24.2 | 23.3 | 37.3 | 50.1 | 58.1 | 65.8 |

Bitburg was the "best" station instead of Frankfurt.
 Bitburg and Frankfurt displayed this percentage.
 Hahn the "best" station instead of Frankfurt.
 Fr was the "worst" station instead of Hahn.
 Bitturg was the "worst" station instead of Hahn.

TABLE 51 SINGLE STATION PROBABILITY OF ADVERSE WEATHER

AT BITBURG-FRANKFURT-HAHN FOR DEC-JAN-FEB IN PERCENT

(Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &/OR V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< -5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|-------------------------------|
| 1 | 4.7 | 11.6 | 23.8 | 15.1 | 40.4 | 57.3 | 74.3 | 80.0 |
| | 16.9 | 35.9 | 41.6 | 45.3 | 58.6 | 75.1 | 81.3 | 86.0 |
| 4 | 6.7 | 13.0 | 25.2 | 17.4 | 39.9 | 58.0 | 75.6 | 81.9 |
| | 19.2 | 39.8 | 46.7 | 47.3 | 63.0 | 78.8 | 84.1 | 88.2 |
| 7 | 6.6 | 13.1 | 25.0 | 18.8 | 42.2 | 59.8 | 76.9 | 83.0 |
| | 17.7 | 38.0 | 46.8 | 48.9 | 64.8 | 82.9 | 87.7 | 91.0 |
| 10 | 10.7 | 14.3 | ¹ 37.7 | 19.6 | ¹ 56.2 | 74.0 | ¹ 83.8 | ¹ 87.4 |
| | 22.2 | 38.8 | 46.8 | 47.4 | 65.9 | 79.6 | ² 85.9 | ² 90.2 |
| 13 | 7.2 | 12.6 | ¹ 28.9 | 16.3 | ¹ 45.6 | 65.0 | ¹ 78.9 | 182.6 |
| | 16.7 | 35.8 | 43.2 | 44.3 | 57.8 | 75.2 | 81.9 | 86.3 |
| 16 | 16.9 | 11.1 | ¹ 24.0 | 15.7 | ¹ 40.6 | 58.9 | ¹ 74.7 | 79.6 |
| | 16.7 | 31.6 | 39.6 | 40.1 | 55.7 | 72.7 | 80.0 | 83.8 |
| 19 | 4.0 | 9.6 | 21.6 | 13.8 | 38.7 | 54.8 | 71.9 | ¹ 77.8 |
| | 13.9 | 31.0 | 39.0 | 40.4 | 58.1 | 73.6 | 81.1 | 85.1 |
| 22 | 4.2 | 10.2 | 22.1 | 14.7 | ¹ 38.4 | 56.1 | ¹ 72.0 | 76.8 |
| | 12.8 | 33.9 | 39.9 | 41.8 | 56.7 | 73.4 | 79.6 | 84.7 |

Bitburg was the "best" station instead of Frankfurt.
 Frankfurt was the "worst" station instead of Hahn.

TABLE 52 TWO STATION PROBABILITIES OF ADVERSE WEATHER AT BITBURG-FRANKFURT-HAHN (ANNUAL SUMMARY IN PERCENT) (Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.8 | 2.4 | 6.6 | 4.0 | 14.7 | 25.9 | 37.9 | 44.5 |
| | 3.2 | 7.5 | 11.4 | 11.2 | 21.3 | 35.3 | 44.7 | 51.3 |
| 4 | ¹ 1.6 | 3.2 | 9.0 | 5.0 | 19.2 | 32.9 | 46.7 | 54.1 |
| | 4.2 | 8.9 | 15.1 | 13.3 | 27.2 | 42.9 | 52.5 | 59.3 |
| 7 | 2.5 | 4.0 | ¹ 13.3 | 6.2 | ¹ 27.2 | ¹ 42.3 | ¹ 54.7 | 162.8 |
| | 5.7 | 10.2 | 18.8 | 15.6 | 32.2 | 51.1 | 59.9 | 66.8 |
| 10 | 2.0 | 3.6 | 11.4 | 6.1 | ² 24.4 | ¹ 39.8 | ¹ 53.8 | 161.1 |
| | 3.9 | 9.0 | 14.6 | 14.5 | 27.7 | 46.4 | 58.5 | 64.7 |
| 13 | 0.8 | 2.1 | 6.4 | 3.8 | 13.5 | 25.5 | 44.8 | 52.2 |
| | 1.7 | 5.9 | 9.2 | 9.6 | 17.2 | 32.5 | 51.7 | 57.8 |
| 16 | 0.6 | 1.8 | 5.1 | 3.0 | 11.3 | 21.1 | 35.7 | 42.6 |
| | 1.6 | 5.0 | 7.6 | 8.2 | 15.6 | 27.4 | 41.6 | 47.9 |
| 19 | 0.4 | 1.8 | 4.8 | 3.1 | 11.8 | 21.2 | 33.5 | 40.7 |
| | 1.9 | 5.4 | 8.4 | 8.4 | 17.0 | 28.9 | 39.8 | 46.6 |
| 22 | 0.6 | 1.8 | 4.5 | 3.5 | 11.4 | 21.2 | 33.0 | 39.9 |
| | 2.2 | 6.4 | 9.4 | 9.8 | 17.7 | 29.8 | 39.2 | 46.1 |

Frankfurt/Hahn was the "best" station combination instead of Bitburg/Frankfurt.
 Frankfurt/Hahn displayed the same percentage as Bitburg/Frankfurt.

TABLE 53 TWO STATION PROBABILITIES OF ADVERSE WEATHER

AT BITBURG-FRANKFURT-HAHN FOR SEP-OCT-NOV IN PERCENT

(Local Standard Time)

1961-1970

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &/OR V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 1.5 | 3.2 | ¹ 10.2 | 5.2 | 22.0 | 35.0 | 46.5 | 53.3 |
| | 4.4 | 9.1 | 15.4 | 13.2 | 27.9 | 42.3 | 50.6 | 57.7 |
| 4 | 12.5 | 4.5 | 14.4 | 6.0 | 28.2 | 43.6 | ¹ 56.5 | 63.3 |
| | 5.9 | 10.1 | 19.2 | 15.8 | 34.8 | 50.3 | 59.1 | 65.9 |
| 7 | 14.6 | 6.8 | ¹ 20.7 | 8.7 | ¹ 36.2 | ¹ 51.2 | 162.1 | ¹ 69.5 |
| | 10.0 | 14.0 | 25.9 | 19.0 | ² 41.5 | 58.4 | 268.8 | ² 76.4 |
| 10 | ¹ 3.2 | 6.0 | ¹ 15.7 | 8.6 | ¹ 32.2 | ¹ 48.8 | ¹ 61.3 | ¹ 67.3 |
| | 6.7 | 13.1 | 20.5 | 17.6 | ² 36.2 | ² 55.3 | ² 68.7 | ² 75.2 |
| 13 | 0.9 | 2.5 | 7.1 | 4.7 | ¹ 16.2 | ¹ 29.4 | ¹ 45.9 | ¹ 54.2 |
| | 1.4 | 6.5 | 10.3 | 10.5 | 20.2 | 37.3 | 52.9 | 59.5 |
| 16 | 0.7 | 2.0 | 5.1 | 2.7 | ¹ 12.3 | ¹ 24.3 | ¹ 37.0 | 44.1 |
| | 1.5 | 5.3 | 7.8 | 8.5 | 17.5 | 29.8 | 40.1 | 46.3 |
| 19 | 10.5 | 2.0 | 5.2 | 3.4 | 14.7 | 26.6 | 37.1 | 45.9 |
| | 1.9 | 6.0 | 9.8 | 9.5 | 19.4 | 32.2 | 42.5 | 51.7 |
| 22 | 0.9 | 2.7 | 7.5 | 4.6 | 16.5 | 27.5 | 39.2 | 47.0 |
| | 2.6 | 7.6 | 11.9 | 11.3 | 21.4 | 34.3 | 43.5 | 51.4 |

Frankfurt/Hahn was the "best" station combination instead of Bitburg/Frankfurt.
 Bitburg/Frankfurt was the "worst" station combination instead of Bitburg/Hahn.

TABLE 54 TWO STATION PROBABILITIES OF ADVERSE WEATHER

AT BITBURG-FRANKFURT-HAHN FOR DEC-JAN-FEB IN PERCENT

(Local Standard Time)

| HR . | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &/OR V< 5 MI |
|------|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 1.4 | 3.2 9.1 | 13.1 21.8 | 8.4 23.0 | 26.4 37.3 | 46.6 59.1 | 63.3 70.7 | 69.9 76.3 |
| 4 | 2.6 | 4.5 | 14.8 | 9.7 | 27.7 | 47.3 | 65.9 | 72.6 |
| | 7.9 | 10.1 | 25.3 | 25.1 | 41.8 | 63.1 | 73.7 | 77.8 |
| 7 | 2.8 | 6.8 | 15.9 | 11.2 | 29.4 | 49.0 | 67.8 | 74.4 |
| | 7.2 | 14.0 | 26.2 | 25.7 | 41.6 | 66.4 | 77.6 | 81.2 |
| 10 | 3.8 | 6.0 | 23.8 | 11.6 | 41.3 | 60.7 | 75.2 | 81.4 |
| | 8.3 | 13.1 | 28.9 | 27.0 | 47.9 | 66.9 | 76.8 | ² 82.8 |
| 13 | 2.3 | 2.5 | 17.0 | 9.3 | 31.6 | 51.7 | 68.4 | 74.1 |
| | 5.3 | 6.5 | 22.8 | 22.1 | 38.2 | 60.4 | 72.9 | 77.4 |
| 16 | 1.7 | 2.0 | 14.4 | 8.4 | 28.1 | 45.3 | 63.1 | 70.2 |
| | 4.9 | 5.3 | 19.4 | 20.1 | 35.0 | 56.2 | 69.1 | 74.6 |
| 19 | 1.1 | 2.0 | 11.7 | 7.6 | 25.8 | 42.4 | 60.1 | 67.7 |
| | 5.1 | 6.0 | 19.9 | 19.6 | 35.3 | 55.9 | 68.9 | 73.9 |
| 22 | 11.2 | 2.7 | 9.4- | 7.9 | 23.7 | 42.3 | 60.3 | 66.9 |
| | 5.2 | 7.6 | 19.6 | 21.7 | 34.9 | 54.9 | 67.0 | 72.8 |

Frankfurt/Hahn was the "best" station combination instead of Bitburg/Frankfurt.
 Frankfurt/Hahn was the "worst" station combination instead of Bitburg/Hahn.

TABLE 55
THREE STATION PROBABILITIES OF ADVERSE WEATHER

AT BITBURG-FRANKFURT-HAHN ANNUAL SUMMARY IN PERCENT

(Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 0.6 | 1.8 | 4.9 | 3.2 | 12.3 | 23.0 | 34.6 | 41.0 |
| 4 | 1.0 | 2.3 | 6.9 | 3.8 | 15.8 | 28.8 | 42.0 | 49.3 |
| 7 | 1.6 | 2.7 | 9.5 | 4.8 | 21.5 | 36.9 | 49.6 | 57.8 |
| 10 | 1.3 | 2.5 | 8.4 | 4.8 | 19.5 | 34.5 | 48.9 | 56.5 |
| 13 | 0.4 | 1.4 | 5.0 | 2.9 | 10,9 | 22.2 | 39.8 | 46.6 |
| 16 | 0.5 | 1.3 | 4.0 | 2.4 | 9.8 | 18.8 | 31.2 | 37.5 |
| 19 | 0.3 | 1.3 | 4.0 | 2.5 | 10.3 | 19.3 | 30.4 | 37.5 |
| 22 | 0.3 | 1.3 | 3.9 | 3.0 | 10.0 | 19.4 | 29.9 | 36.8 |

TABLE 56
THREE STATION PROBABILITIES OF ADVERSE WEATHER

AT BITBURG-FRANKFURT-HAHN FOR SEP-OCT-NOV IN PERCENT

(Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 1.0 | 2.5 | 7.1 | 4.1 | 17.5 | 29.7 | 41.0 | 48.0 |
| 4 | 1.8 | 3.0 | 10.5 | 4.3 | 22.7 | 36.8 | 49.7 | 56.8 |
| 7 | 3.4 | 4.7 | 15.8 | 6.4 | 29.9 | 45.5 | 56.9 | 64.6 |
| 10 | 2.1 | 4.1 | 11.4 | 6.3 | 27.1 | 44.0 | 57.5 | 63.8 |
| 13 | 0.3 | 1.0 | 4.9 | 3.3 | 12.7 | 26.3 | 41.7 | 49.1 |
| 16 | 0.4 | 1.2 | 3.4 | 1.6 | 9.8 | 20.9 | 31.4 | 37.7 |
| 19 | 0.3 | 1.6 | 4.3 | 3.0 | 12.3 | 23.3 | 33.1 | 41.5 |
| 22 | 0.5 | 2.2 | 6.2 | 3.8 | 13.6 | 24.2 | 33.8 | 41.8 |

TABLE 57
THREE STATION PROBABILITIES OF ADVERSE WEATHER

AT BITBURG-FRANKFURT-HAHN FOR DEC-JAN-FEB IN PERCENT

(Local Standard Time)

| HR | V <u><</u> 1 KM | C <u><</u> 500 FT | C<500 FT &70R V< 2 MI | C <u><</u> 800 FT | C<800 FT &70R V< 3 MI | C<2000 FT &70R V< 4 MI | C<4500 FT &70R V< 4 MI | C<8000 FT &70R V< 5 MI |
|----|--------------------|----------------------|-----------------------------|----------------------|-----------------------------|------------------------------|------------------------------|------------------------------|
| 1 | 1.3 | 4.2 | 10.9 | 7.9 | 24.2 | 43.6 | 60.1 | 66.9 |
| 4 | 1.9 | 5.1 | 12.6 | 8.4 | 25.9 | 45.2 | 63.2 | 69.8 |
| 7 | 1.7 | 5.0 | 12.4 | 9.6 | 27.0 | 47.0 | 65.5 | 72.0 |
| 10 | 2.9 | 4.9 | 19.6 | 9.4 | 36.3 | 55.2 | 70.2 | 77.8 |
| 13 | 1.3 | 4.4 | 14.7 | 7.3 | 27.7 | 47.4 | 64.8 | 70.1 |
| 16 | 1.6 | 4.1 | 12.2 | 7.4 | 25.8 | 43.0 | 59.2 | 66.8 |
| 19 | 0.9 | 3.3 | 10.1 | 6.1 | 23.8 | 40.9 | 57.9 | 65.8 |
| 22 | 0.6 | 2.7 | 8.3 | 7.4 | 22.2 | 40.6 | 57.4 | 64.4 |

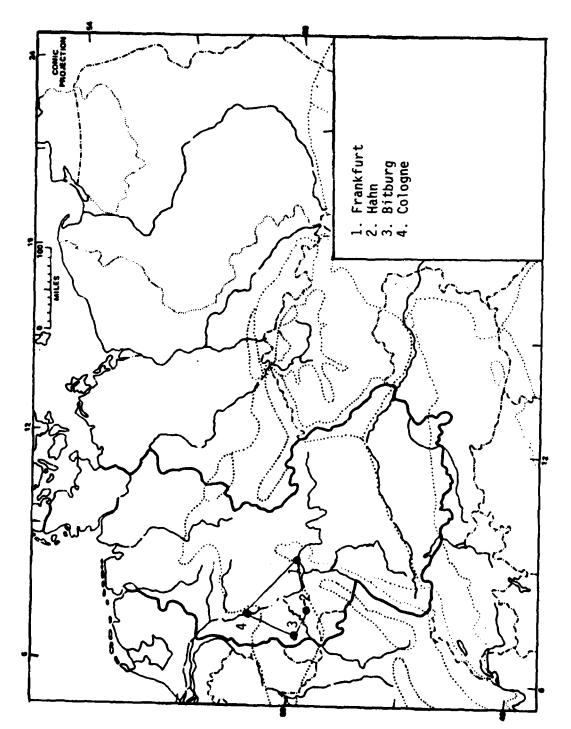


Figure 1. Location of Stations

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